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A 8818-1

SALARIES OF SCIENTISTS · ENGINEERS AND TECHNICIANS

A Summary of Salary Surveys

Tenth Edition

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November 1981 $25

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INTRODUCTION

Salary surveys are conducted by numerous organizations, including agencies and departments of the federal government, professional scientific and engineering organizations, educational associations, magazine publishers, and other professional and trade organizations. While some surveys deal directly with salaries of scientists and engineers, others cover much broader occupational areas. Most salary surveys conducted by professional scientific and engineering societies cover only their membership. However, since such societies generally represent the majority of the population in their particular discipline, the results may be generalized to these professional populations. Some smaller salary surveys in specific disciplines are included for comparative purposes.

Although most of the salary information in this report is available from its original source, this compilation brings together salary information from a variety of sources both for purposes of comparison and easier accessibility.

For a number of reasons, exact correlation of results of different surveys is generally not possible without access to the original data and many times not even then because of the different methodologies employed when carrying out the survey and the differing populations in the survey. The statistical bases used in surveys include medians, means, percentiles and ranges of one of these, which are not directly comparable. In addition to the "snapshot" characteristic of surveys which provide information as of any given date, the time periods covered by the surveys include calendar year, fiscal year, academic year, and quarterly segments starting at various points in the year. The base and time period for each table is noted with the table and/or in the introductory statement for the section in which it appears.

Where comparisons of similar data are possible, some apparent discrepancies appear. No attempt has been made to evaluate the relative reliability of the samples, but the number of people in the sample is given when known. In some cases, the number of respondents listed within the table will not match totals for all fields or all groups, either because some areas not applicable to science and engineering have been omitted, or because only selected variables have been included in the table.

Generally, only the most current salary information is included from each data source. However, some trend data, limited to the survey immediately preceeding the current survey, is included for comparison. Long trend salary information may be examined by referring to earlier editions of this publication, which has been prepared bienially since 1964. Copies of most of the first nine editions of *SALARIES OF SCIENTISTS, ENGINEERS AND TECHNICIANS, A Summary of Salary Surveys* are available from the *Scientific Manpower Commission.*

The source of the data is given at the top of each table. Full bibliographic references for each data source begin on page 126. A cross-index beginning on page 139 and a detailed Table of Contents provide rapid access to specific salary information.

This report was prepared by Eleanor Babco, Associate Director of the Scientific Manpower Commission. Special thanks are extended to Sally Yochelson and Tim Babco, as well as the SMC staff for their invaluable assistance.

STARTING SALARIES

- The *College Placement Council SALARY SURVEY - A STUDY OF 1980-81 BEGINNING OFFERS* reports beginning salary data based on job offers, not acceptances, made to graduating college students at all degree levels in selected curricula and graduate programs during the normal recruiting period, September 1980 to June 1981. Data are submitted on an ongoing basis by 184 placement offices at 161 colleges and universities throughout the United States. Offers are reported from employing organizations in business, industry, government, and nonprofit and educational organizations covering a broad range of functional areas, except teaching. Formal reports are issued in January, March, and July.

The final report of the 1980-81 recruiting year found strong recruiting for engineering graduates, who comprised only 7% of the total bachelor's graduates in 1980-81 but received 65% of all salary offers. At $2,221 per month, bachelor's degree petroleum engineers topped not only all other bachelor's degree graduates, but master's degree graduates as well, with offers averaging 9.4% higher than the $2,030 average salary offer recorded by chemical engineering, the next highest bachelor's discipline. Overall, increases in salaries to engineering graduates from 1979-80 ranged from 10% to 14%. In the sciences (which accounted for 9% of the bachelor's volume), computer science continued to dominate in number of offers, but commanded second place in terms of salary offers with a an average offer of $1,726, up 10.8%. Other physical and earth sciences received the top dollar offer in the sciences - $1,826, up 19.6% over the previous year. At the low end of the scale, bachelor's candidates in humanities and social sciences, who make up 33% of all graduates at the bachelor's level, received only 4% of the job offers, and their average salary offers were only about half the top engineering average - $1,204 per month for humanities graduates and $1,166 for social science graduates outside of economics. Although graduates in the business disciplines represent only 20% of all graduates, they received 22% of the offers to all bachelor's graduates. The highest average offer in the business disciplines went to accounting graduates at $1,418 (Table 1).

Average dollar offers to women were slightly higher than those to men in seven of 24 curricula - all in engineering. In the business, humanities and social sciences, and science groups, the average salary offer to women was lower in all cases except accounting. In that discipline, the same average monthly salary offer of $1,418 was reported for both men and women (Table 2).

By functional area, the bulk of the offers to both men and women were for engineering jobs. The engineering average dollar offer was also the highest - $1,911 for men and $1,932 for women. Next highest average dollar offers were made to graduates in the EDP field - $1,723 to men and $1,681 to women (Table 3).

At the master's level, chemical engineering recorded the highest average monthly salary offer - $2,207, up 13.4% from 1980. MBA candidates with a technical undergraduate degree ranked second at $2,189 per month, an 11.1% gain. As was true for bachelor's graduates, lowest salary offers at the master's level went to humanities and social science graduates - $1,406 and $1,417 respectively (Table 4).

At the doctoral level, top dollar average offers went to electrical and computer engineering graduates - $2,793 per month, up 10.2% over July 1980 - while the lowest offers went to chemistry graduates at $2,481 per month. Doctoral graduates in chemistry recorded the most offers at this level (Table 5).

- The *ENDICOTT REPORT 1981* is the 35th annual survey of trends in the employment of college and university graduates in business and industry. Data from 142 well-known business and industrial concerns in 20 states and Washington, D. C., representing all major regions of the nation, indicate that these companies plan to hire 15% more college graduates at the bachelor's level in 1981 than were employed from the 1980 classes. At the master's level, the increase is 10%, with the greatest demand for graduates in engineering, up 21% over the previous year.

Although engineers show the highest starting salaries, an examination of the median monthly salary of college graduates employed five years ago (class of 1975) and ten years ago (class of 1970) found engineering graduates continuing to enjoy that advantage after five years, but losing it after ten years. Graduates of 1970 working in sales, business administration and accounting all have higher median salaries than engineers in 1980 (Table 6).

Engineering graduates continue to receive the highest average starting salaries in 1981 - $1,864 per month - followed by graduates in computer science at $1,697 and chemistry at $1,628. As is true in other surveys, Endicott found that liberal arts graduates at the bachelor's level received the lowest average starting salaries at $1,287 per month. At the master's level, MBA graduates with a technical undergraduate degree received the highest average monthly salaries - $2,202, up 10.3% (Table 7).

- 1980 starting salaries for inexperienced chemists rose 3% from 1979 for B.S. graduates, 18% for M.S. candidates and 15% for Ph.D.'s, according to the *American Chemical Society's STARTING SALARIES 1980*, (Chart 1). An examination of beginning salaries to inexperienced chemists and chemical engineers finds that women chemists received higher average salaries at both the bachelor's and master's levels, but somewhat lower salaries at the doctorate level. Women chemical engineers received higher starting salaries at the bachelor's level, but less at the master's level (Table 8).

The type of employer has an effect on the average starting salaries of both chemists and chemical engineers. The average (mean) salaries for inexperienced B.S. chemists and chemical engineers of both sexes were highest in the manufacturing industry. The small numbers in most of the categories do not allow significant comparisons at graduate degree levels, (Tables 9, 10 and 14).

The geographic region of the country had some bearing on starting salaries for chemists and chemical engineers at all degree levels. Generally, those chemists in the Pacific region and those chemical engineers in the West South Central area reported the highest starting salaries (Table 11).

When looking at starting salaries for male and female chemists for all types of employers in all areas of the country since 1961, the gains made by women over two decades seem to be disappearing in 1980 (Table 12).

Another factor affecting salaries is the area of specialization. The highest mean starting salary for graduate chemists is in physical chemistry and the lowest in biochemistry (Table 13).

Most inexperienced chemical engineers in 1980 had jobs in the chemical profession - 78% of B.S.'s, 86% of M.S.'s and nearly all of the Ph.D.'s. By type of employer, those chemical engineers working in manufacturing industry had the highest starting salaries at all degree levels (Table 14).

- Salaries of new physics bachelor's graduates appear to have kept pace with inflation, according to the *1979-80 SURVEY OF PHYSICS AND ASTRONOMY BACHELOR'S DEGREE RECIPIENTS* by the *American Institute of Physics*. For all employers combined, starting salaries of B.S. physics graduates increased 17% over the previous year. However, a striking salary difference exists between physicists working in industry, who earned a median starting salary of $1,665; and those employed in high schools who averaged $960 per month. For the third consecutive year, women graduates with physics bachelor's degrees reported a higher median starting salary than men - $1,610 to $1,560, Table 15).

- Industry also paid higher median starting salaries to graduate physicists, according to the *AIP 1979-80 GRADUATE STUDENT SURVEY* (Table 16).

- The annual *SALARY SURVEY FOR NEW RECIPIENTS OF DOCTORATES* for 1980 by the *American Mathematical Society* found that about 60% took positions in university or college mathematical science departments, 29% began work in government, business, and industry, while the remaining 11% are employed in two-year colleges, high schools, other academic departments or research institutes. Business and industry continued to pay the highest starting salaries to doctorates in mathematics in 1980 (Table 17) as they have for a number of years (Table 18).

- The thirteenth annual *NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES,* conducted by the *Battelle Columbus Laboratories* for the *U.S. Department of Energy*, finds that engineers continue to lead all other disciplines in highest starting salaries for bachelor's and master's degree levels in 1980 with new physics Ph.D.'s leading other degree fields (Table 19). Those engineers working in chemical engineering continue to receive the highest starting salaries ($1,791 per month), while those working in aeronautical engineering receive the lowest ($1,685 per month) (Table 20).

- Bachelor's degree engineers who received their degree in petroleum engineering received the highest starting salaries in 1980 - $1,989 per month - according to *THE PLACEMENT OF ENGINEERING AND TECHNOLOGY GRADUATES 1980*, conducted by the *Engineering Manpower Commission*. Lowest salaries were recorded by engineers who majored in architectural engineering - $1,388 per month. At the master's level, computer engineering and naval/marine engineering graduates commanded the highest starting salaries - $1,936, while doctoral chemical engineers received the highest salaries - $2,384 per month (Table 21). Trends in starting salaries to engineering graduates by degree level from 1964 to 1980 are shown in Chart 2.

Starting salaries of bachelor's degree and associate degree technology graduates are also reported by the ***Engineering Manpower Commission*** in this survey (Tables 22 and 23). Salaries of bachelor's degree technology graduates are about 13% below those of bachlor's in engineering, with the relationships between subfields approximately the same. At the Associate degree level, those graduates majoring in nuclear technology commanded the highest salaries - $1,377 per month - while the lowest salaries were offered to those graduates majoring in architectural technology.

- The *U. S. Department of Labor's OCCUPATIONAL OUTLOOK HANDBOOK* includes information on starting salaries as well as estimating the number of people employed in various fields. Salary and employment information in selected scientific and engineering fields is summarized in Table 24.

- The *FINANCIAL AND DATA PROCESSING PREVAILING STARTING SALARIES* survey has been conducted by the *Robert Half* organization since 1950. The 1981 survey finds that programmer/analysts working in small companies received the highest salary increases from 1980 - 15.9% - among all the data processing positions studied. The smallest increase was registered for data base administrators working in large companies - 3.7%. Average starting salary ranges of data processing personnel are shown in Table 25.

- Starting salary offers to graduates of two-year colleges are collected by the *Middle Atlantic Career Counseling Association*. In the 1979-80 academic year, graduates in science and engineering technologies led the salary offers to two-year graduates. At the bottom of the salary list were graduates in child care ($7,906) followed by those in commercial art ($8,164) (Table 26). Starting salary offers to two-year graduates by type of employer are shown in Table 27.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1980-81 Beginning Offers Formal Report, No. 3, July 1981.

Table 1

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO INEXPERIENCED BACHELOR'S DEGREE CANDIDATES BY CURRICULUM, July 1980 and July 1981

CURRICULUM	No. Offers July 1981	Average $ Offer		Percent Change in $ Offers from July 1980
		July 1981	July 1980	
BUSINESS				
Accounting	7,894	$1,418	$1,293	9.7%
Business - General (includes Management)	4,376	1,356	1,218	11.3
Marketing & Distribution	1,741	1,265	1,145	10.5
ENGINEERING				
Aeronautical	697	1,814	1,648	10.1
Chemical	7,428	2,030	1,801	12.7
Civil	4,416	1,775	1,554	14.2
Electrical (including Computer Engineering)	10,768	1,882	1,690	11.4
Industrial	1,915	1,845	1,655	11.5
Mechanical	10,673	1,908	1,703	12.0
Metallurgical (includes Metallurgy & Engineering Ceramics)	888	1,914	1,726	10.9
Mining	285	1,941	1,734	11.9
Nuclear (includes Engineering Physics)	349	1,870	1,668	12.1
Petroleum	1,445	2,221	1,987	11.8
Technology	1,768	1,808	1,585	14.1
HUMANITIES AND SOCIAL SCIENCES				
Humanities	675	1,204	1,074	12.1
Economics*	638	1,370	1,252	9.4
Other Social Sciences	991	1,166	1,072	8.8
SCIENCES				
Agricultural	490	1,287	1,192	8.0
Biological	215	1,268	1,159	9.4
Chemistry	409	1,637	1,459	12.2
Computer	2,876	1,726	1,558	10.8
Health (Medical) Professions	466	1,342	1,155	16.2
Mathematics	729	1,624	1,475	10.1
Other Physical & Earth Sciences	703	1,846	1,543	19.6

* Includes economics programs with both business and social science orientation.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1980-81 Beginning Offers, Formal Report, No. 3, July 1981.

Table 2

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY CURRICULUM AND SEX, July 1980 and July 1981

CURRICULUM	No. Offers July 1980		Average $ Offers July 1980		No. Offers July 1981		Average $ Offers July 1981	
	Men	Women	Men	Women	Men	Women	Men	Women
BUSINESS								
Accounting	5,636	2,945	$1,293	$1,292	4,945	2,949	$1,418	$1,418
Business - General (inc. Management)	3,327	1,478	1,232	1,187	2,979	1,397	1,375	1,315
Marketing and Distribution	1,260	786	1,168	1,108	1,003	738	1,293	1,227
ENGINEERING								
Aeronautical	559	32	1,650	1,621	646	51	1,812	1,840
Chemical	5,439	1,590	1,800	1,804	5,734	1,694	2,031	2,027
Civil [1]	3,645	536	1,549	1,584	3,755	661	1,771	1,796
Electrical [2]	10,160	960	1,690	1,688	9,694	1,074	1,882	1,886
Industrial	1,819	475	1,648	1,683	1,401	514	1,839	1,859
Mechanical	9,638	999	1,700	1,726	9,421	1,252	1,907	1,911
Metallurgical [3]	693	187	1,731	1,707	698	190	1,913	1,921
Mining	170	5	1,736	1,687	253	32	1,942	1,929
Nuclear (inc. Engineering Physics)	321	30	1,666	1,692	292	57	1,866	1,890
Petroleum	687	75	1,986	1,994	1,271	174	2,224	2,206
Technology	1,727	99	1,587	1,540	1,644	124	1,809	1,792
HUMANITIES AND SOCIAL SCIENCES								
Humanities	236	345	1,121	1,042	268	407	1,275	1,157
Economics [4]	354	232	1,265	1,232	403	235	1,389	1,336
Other Social Sciences	472	725	1,162	1,013	389	602	1,270	1,099
SCIENCES								
Agricultural	447	104	1,221	1,069	402	88	1,304	1,206
Biological	132	90	1,210	1,084	108	107	1,315	1,222
Chemistry	249	178	1,477	1,434	253	156	1,653	1,612
Computer	1,637	932	1,567	1,543	1,830	1,046	1,736	1,709
Health (Medical) Professions	49	251	1,233	1,139	68	398	1,557	1,305
Mathematics	404	419	1,493	1,457	380	349	1,641	1,607
Other Physical and Earth Sciences	307	46	1,576	1,324	558	145	1,854	1,813

[1] Includes Construction, Sanitary & Transportation Engineering.
[2] Includes Computer Engineering.
[3] Includes Metallurgy and Engineering Ceramics.
[4] Includes Economics programs with both Business and Social Science Orientation.

SOURCE: The College Placement Council, CPC Salary - A Study of 1980-81 Beginning Offers, Formal Report, No. 3, July 1981.

Table 3

NATIONAL AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY FUNCTIONAL AREA AND SEX, July 1980 and July 1981

FUNCTIONAL AREA	No. Offers July 1980		Average $ Offers July 1980		No. Offers July 1981		Average $ Offers July 1981	
	Men	Women	Men	Women	Men	Women	Men	Women
Accounting/Auditing	5,639	2,988	$1,294	$1,292	5,000	3,013	$1,418	$1,419
Business Administration	1,577	814	1,236	1,142	1,202	638	1,413	1,288
Communications	135	92	1,336	1,047	118	120	1,324	1,091
Community and Service Organizations Work	90	137	1,012	965	79	162	1,148	1,013
EDP-Programming/ Systems	2,114*	1,268	1,556	1,508	2,289	1,348	1,723	1,681
Engineering	32,215*	4,543	1,695	1,725	32,943	5,463	1,911	1,932
Farm and Natural Resources Mgmt.	115	35	1,130	977	142	26	1,333	1,186
Finance and Economics	786	373	1,241	1,236	927	483	1,387	1,373
Health (Medical) Services	57	265	1,109	1,130	101	457	1,428	1,276
Manufacturing and/or Industrial Operations	1,235	228	1,615	1,593	857	180	1,750	1,676
Marketing - Consumer Product/Services	839*	431	1,228	1,131	574	309	1,360	1,288
Marketing - Industrial Product/Services	670	182	1,417	1,385	574	192	1,559	1,554
Mathematics/Statistics	287	245	1,437	1,427	229	184	1,576	1,527
Merchandising/Sales Promotion	1,011	792	1,128	1,032	1,130	803	1,248	1,125
Personnel/Employee Relations	122	110	1,245	1,199	114	123	1,417	1,209
Research - Non-Scientific	142	95	1,383	1,283	101	86	1,574	1,326
Research - Scientific	849	313	1,589	1,424	979	406	1,798	1,656
Rotational Training - Non-Technical	591	416	1,175	1,089	458	322	1,312	1,188
Rotational Training - Technical	824	133	1,657	1,652	578	125	1,835	1,855

* Figures in July 1980 report were off by one offer.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1980-81 Beginning Offers, Final Formal Report, No. 3, July 1981.

Table 4

NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO INEXPERIENCED MASTER'S DEGREE CANDIDATES BY CURRICULUM, July 1980 and July 1981

CURRICULUM	No. Offers July 1981	Average $ Offers		Percent Change in $ Offers from July 1980
		July 1981	July 1980	
ENGINEERING				
Chemical	382	$2,207	$1,947	13.4%
Civil (including Construction, Sanitary & Transportation Engineering	309	2,033	1,753	16.0
Electrical (including Computer Engineering	817	2,138	1,912	11.8
Industrial	163	2,089	1,861	12.3
Mechanical	475	2,125	1,893	12.3
Nuclear (including Engineering Physics	114	2,056	1,831	12.3
SCIENCES				
Geology & related Geological Sciences	312	2,110	1,873	12.7
Chemistry	79	1,967	1,688	16.5
Computer Science	278	2,057	1,858	10.7
Mathematics	69	1,929	1,685	14.5
Metallurgy (including Metallurgical Engineering, Materials Engineering & Science, and Ceramics)	98	2,117	1,891	12.0
BUSINESS				
Accounting	358	1,647	1,517	8.6
MBA - Non-Technical Undergraduate Less than one year	2,843	2,000	1,795	11.4
MBA - Technical Undergraduate Less than one year	650	2,189	1,971	11.1
MS - Business (including Management, Marketing, Finance, etc.)	261	1,984	1,794	10.6
Industrial Management (incl. Admin.)	121	2,053	1,799	14.1
Administration (including Public, Hospital, etc.	74	1,697	1,569	8.2
HUMANITIES AND SOCIAL SCIENCES				
Humanities	45	1,406	1,309	7.4
Social Sciences	136	1,417	1,298	9.2

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1980-81 Beginning Offers, Formal Report, No. 3, July 1981.

Table 5

NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO DOCTORAL DEGREE CANDIDATES BY CURRICULUM, July 1980 and July 1981

CURRICULUM	No. Offers July 1981	Average $ Offers		Percent Change in $ Offers from July 1980
		July 1981	July 1980	
ENGINEERING				
Chemical	211	$2,745	$2,452	12.0%
Civil (including Construction, Sanitary & Transportation)	18	2,523	2,089	20.8
Electrical (including Computer)	136	2,793	2,534	10.2
Mechanical	75	2,659	2,426	9.6
SCIENCES				
Chemistry	418	2,481	2,261	9.7
Mathematics (including Operations, Research, Statistics & Actuarial Science)	84	2,573	2,199	17.0
Metallurgy (including Metallurgical Engineering, Materials Engineering, & Science & Ceramics)	44	2,575	2,419	6.5
Physics	125	2,612	2,303	13.4

SOURCE: The Endicott Report, 1981, Thirty-fifth Annual Report, by Frank S. Endicott

Table 6

NUMBER AND 1980 MEDIAN MONTHLY SALARIES OF GRADUATES EMPLOYED FIVE YEARS AGO (CLASS OF 1975) AND EMPLOYED TEN YEARS AGO (CLASS OF 1970)

FIELD	Employed 5 Years Ago		Employed 10 Years Ago	
	Number	Salary	Number	Salary
Engineering	1,444	$2,231	920	$2,465
Accounting	707	2,036	525	2,483
Sales	324	2,110	228	2,658
Business Administration	538	2,073	456	2,488
Liberal Arts	393	1,932	313	2,340

SOURCE: The Endicott Report, 1981, Thirty-fifth Annual Report, by Frank S. Endicott.

Table 7

NUMBER AND AVERAGE STARTING SALARIES FOR NEW GRADUATES BY FIELD AND DEGREE, 1980 AND 1981

FIELD	BACHELOR'S DEGREE				MASTER'S DEGREE			
	No. to be hired in 1981	1980	1981	Percent Increase	No. to be hired in 1981	1980	1981	Percent Increase
Engineering (93)	8,872	$1,685	$1,864	10.6	998	$1,900	$2,094	10.2
Accounting (72)	3,657	1,325	1,415	6.8	382	1,694	1,706	0.7
Sales-Marketing (44)	1,986	1,397	1,435	2.7				
Business Admin. (68)	1,859	1,275	1,350	5.9				
Liberal Arts (28)	467	1,221	1,287	5.4				
Chemistry (32)	351	1,538	1,628	5.9				
Math-Statistics (36)	371	1,462	1,550	6.0				
Economics-Finance (34)	387	1,323	1,407	6.3				
Computer Science (62)	1,453	1,551	1,697	9.4				
Other Fields (33)	569	1,540	1,669	8.4				
MBA with Technical BS					453	1,997	2,202	10.3
MBA with Non-Technical BA					681	1,740	1,890	8.6
Other Technical Fields					537	1,799	1,965	9.2
Other Non-Technical Fields					310	1,650	1,771	7.3

NOTE: Number of hiring companies in parentheses.

SOURCE: American Chemical Society, Starting Salaries 1980, January 1981.

Table 8

NUMBER AND MEAN ANNUAL STARTING SALARIES OF INEXPERIENCED CHEMISTS* AND CHEMICAL ENGINEERS* BY HIGHEST DEGREE EARNED AND SEX, 1980

HIGHEST DEGREE EARNED	CHEMISTS				CHEMICAL ENGINEERS			
	Men		Women		Men		Women	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Bachelor's	222	$14,496	162	$14,693	426	$21,370	119	$21,571
Master's	33	19,055	11	19,639	37	23,724	7	23,689
Doctorate	80	25,301	14	25,193	24	27,445	1	28,800

Table 9

NUMBER AND MEAN STARTING SALARIES OF CHEMISTS* BY HIGHEST DEGREE EARNED, TYPE OF EMPLOYER AND SEX, 1980

TYPE OF EMPLOYER	MEN			WOMEN		
	B. S.	M. S.	Ph.D.	B. S.	M. S.	Ph.D.
Manufacturing Industry	(114) $16,166	(27) $19,741	(58) $26,925	(89) $16,543	(6) $19,340	(11) $27,382
Non-Manufacturing Industry	(17) 14,563	(1) 21,000	(2) 24,500	(7) 14,729	(1) 23,400	
College or University	(12) 9,515	(2) 9,000	(8) 14,875	(9) 11,203		(2) 15,450
High School	(10) 10,675	(1) 12,500	(1) 11,000	(6) 10,756		
Government	(11) 13,244	(1) 23,704	(3) 23,209	(9) 13,206	(1) 13,925	(1) 20,600
Hospital/Lab. Non-Profit	(23) 12,203		(2) 24,900	(27) 12,526	(1) 13,660	
Other	(22) 13,940	(1) 21,000	(4) 27,475	(15) 12,167	(2) 24,500	

NOTE: Blanks indicate no data reported.

*Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1980, January 1981.

Table 10

NUMBER AND MEAN STARTING SALARIES OF CHEMISTS* AND CHEMICAL ENGINEERS* BY DEGREE LEVEL AND TYPE OF EMPLOYER, 1980

TYPE OF EMPLOYER	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Manufacturing Industry	(203) $16,331	(33) $19,668	(69) $26,998	(432) $21,741	(36) $23,721	(14) $29,813
Non-Manufacturing Industry	(24) 14,612	(2) 22,200	(2) 24,500	(52) 20,902	(3) 22,933	(1) 35,200
College or University	(21) 10,238	(2) 9,000	(10) 14,990			(7) 23,171
High School	(16) 10,705	(1) 12,500	(1) 11,000			
Government	(20) 13,227	(2) 18,615	(4) 22,550	(13) 19,186	(1) 24,000	(1) 20,200
Hospital/Independent Lab./Non-Profit	(51) 12,429	(1) 13,660	(2) 24,900	(4) 19,975	(2) 23,000	(1) 22,500
Other	(47) 13,374	(3) 23,333	(4) 27,475	(34) 18,911	(2) 24,780	(1) 30,000
All Employers	(385) 14,580	(44) 19,201	(94) 25,285	(545) 21,414	(44) 23,689	(25) 27,499

NOTE: Blanks indicate no data reported.

*Includes only members of the American Chemical Society.

Table 11

NUMBER AND MEAN STARTING SALARIES OF CHEMISTS* AND CHEMICAL ENGINEERS* BY HIGHEST DEGREE EARNED AND GEOGRAPHIC REGION, 1980

GEOGRAPHIC REGION	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Pacific	(28) $14,966	(3) $20,800	(14) $25,679	(46) $21,629	(8) $23,850	(3) $25,467
Mountain	(15) 14,933	(2) 19,000	(4) 27,000	(15) 21,459	(3) 24,787	(1) 21,200
West North Central	(26) 12,312	(1) 13,660	(3) 25,500	(19) 21,552	(2) 22,810	(1) 27,000
West South Central	(29) 16,321	(7) 17,571	(12) 29,655	(63) 22,488	(3) 23,700	(3) 30,000
East North Central	(82) 14,676	(7) 22,312	(16) 23,125	(88) 21,307	(7) 23,906	(4) 26,950
East South Central	(14) 12,049	(1) 28,000	(2) 28,450	(32) 21,488	(2) 24,600	
Middle Atlantic	(97) 15,663	(17) 18,819	(28) 25,632	(177) 21,415	(7) 23,806	(10) 28,708
South Atlantic	(62) 13,865	(6) 17,280	(7) 23,600	(62) 21,207	(9) 23,349	(3) 26,000
New England	(29) 13,132		(8) 20,888	(37) 20,976	(2) 20,750	
All Regions Combined	(385) 14,580	(44) 19,201	(94) 25,285	(545) 21,414	(44) 23,689	(25) 27,499

NOTE: Blanks indicate no data reported.

*Includes only members of the American Chemical Society.

SOURCE: CHEMICAL AND ENGINEERING NEWS, American Chemical Society, November 5, 1962; October 28, 1963; November 9, 1964; October 18, 1965; October 23, 1967; 1979 Survey Report, Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates; & Starting Salaries 1980.

Table 12

MEDIAN MONTHLY STARTING SALARIES FOR MEN AND WOMEN CHEMISTS,* BACHELOR'S LEVEL, 1961-1980

YEAR	MEN	WOMEN	% BELOW MEN
1961	$500	$433	13.4
1962	525	450	14.3
1963	550	473	14.0
1964	560	480	14.2
1965	590	499	15.4
1966	625	550	12.0
1967	660	600	10.0
1968	712	625	12.8
1969	750	702	6.9
1970	758	644	17.7
1971	691	650	5.9
1972	708	650	8.2
1973	750	708	5.9
1974	816	833	+2.1
1975	833	801	3.8
1976	900	908	+1.0
1977	1,000	1,000	0
1978	1,042	1,083	+3.8
1979	1,200	1,233	+2.8
1980	1,413	1,300	8.0

*Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1980, January 1981.

Table 13

NUMBER AND MEAN ANNUAL STARTING SALARIES OF GRADUATE CHEMISTS* BY FIELD OF HIGHEST DEGREE, 1980

FIELD OF HIGHEST DEGREE	M. S.		Ph. D.	
	No.	Mean	No.	Mean
Analytical	10	$18,403	16	$24,925
Inorganic	3	20,795	16	24,450
Organic	13	17,177	39	25,540
Physical	5	21,250	16	26,775
Biochemistry	4	15,070	3	21,695
Chemistry, General	9	19,931	3	19,300
Chemistry, Other	4	22,375	2	26,700
All Fields	48	18,857	97	25,174

SOURCE: American Chemical Society, Starting Salaries 1980, January 1981.

Table 14

NUMBER AND MEDIAN STARTING SALARIES OF CHEMICAL ENGINEERS* BY DEGREE, TYPE OF EMPLOYER AND SEX, 1980

TYPE OF EMPLOYER	MEN			WOMEN		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
All Employers	(426) $21,370	(37) $23,724	(24) $27,445	(119) $21,571	(7) $23,506	(1) $28,800
Manufacturing Industry	(336) 21,717	(31) 23,723	(13) 29,891	(96) 21,826	(5) 23,708	(1) 28,800
Non-manufacturing Industry	(39) 20,739	(1) 22,800	(1) 35,200	(13) 21,391	(2) 23,000	
College or University			(7) 23,171	(3) 18,434		
Government	(10) 19,412	(1) 24,000	(1) 20,200	(1) 21,600		
Hospital/Lab./ Nonprofit Research Inst.	(3) 19,433	(2) 23,000	(1) 22,500	(4) 18,175		
Other	(2) 24,780	(1) 30,000		(2) 21,975		

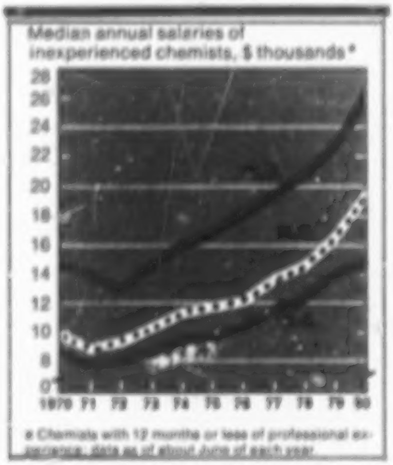
NOTE: Blanks indicate no data reported.

*Includes only members of the American Chemical Society.

SOURCE: Chemical and Engineering News, October 20, 1980

Chart 1

TRENDS IN ANNUAL MEDIAN STARTING SALARIES OF INEXPERIENCED CHEMISTS BY DEGREE LEVEL, 1970-1980



a Chemists with 12 months or less of professional experience; data as of about June of each year

SOURCE: American Institute of Physics, 1979-80 Survey of Physics and Astronomy Bachelor's Degree Recipients, AIP Pub. R-211.12, March 1981; and 1979-80 Graduate Student Survey, AIP Pub. No. R-207.13, May 1981.

Table 15

DISTRIBUTION AND MEDIAN MONTHLY STARTING SALARIES OF PHYSICS BACHELOR'S DEGREE RECIPIENTS BY TYPE OF EMPLOYER AND SEX, 1980

TYPE OF EMPLOYER	MEN (602 Reported Salaries)		WOMEN (88 Reported Salaries)		TOTAL (690 Reported Salaries)	
	Distribution by Employer	Median	Distribution by Employer	Median	Distribution by Employer	Median
Industry - Mfg.	41%	$1,660	40%	$1,675	41%	$1,665
Industry - Service	20	1,630	24	1,620	20	1,630
High School	3	960	3	*	3	960
College or University	3	1,050	4	*	3	1,150
Government, Civilian	7	1,170	13	1,490	8	1,190
Government, Military	17	1,040	6	935	16	1,035
Research Institute	7	1,580	9	1,540	7	1,565
Other	2	1,650	1	*	2	1,650

* Insufficient data.

Table 16

MEDIAN MONTHLY STARTING SALARIES OF GRADUATE PHYSICISTS, 1979-1980

TYPE OF EMPLOYER	TERMINAL MASTER'S RECIPIENTS		DOCTORATE RECIPIENTS			
					Monthly Salaries For	
	% Accepting Positions	Salary	% Accepting Postdocs'	Potentially Permanent Positions	Postdocs'	Potentially Permanent Positions
Secondary School	6%	$1350	%		$ *	$ *
4-Year College	4	*		3	*	*
University	8	*	36	9	1260	1400
Industry	50	1790		31	*	2270
Government (including military)	28	1550	4	5	1650	2040
FFRC**	2		5	5	1580	2150
Other	2	1400	1	1	*	1600
All Employers	100	1740	100		1310	2200

*Fewer than 10 graduates reported salaries

**Federally-funded Research Center

Blanks indicate no salaries reported

SOURCE: American Mathematical Society, NOTICES, Vol. 27, No. 7, November 1980.

Table 17

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR PH.D.'S BY TYPE OF EMPLOYER AND SEX, 1979 AND 1980

TYPE OF EMPLOYER	MEN		WOMEN	
	1979	1980	1979	1980
Teaching or Teaching & Research (9 months)	$15,800	$17,100	$15,200	$16,400
Teaching or Teaching & Research (12 months)	18,800	19,000	23,300	20,000
Research (12 months)	17,400	18,000		20,000
Business & Industry (12 months)	25,100	28,400	25,500	28,300
Government (12 months)	25,400	23,000	23,100	24,700

Table 18

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR NEW PH.D.'S BY TYPE OF EMPLOYER, 1976-1980

TYPE OF EMPLOYER	1976	1977	1978	1979	1980
Teaching or Teaching & Research (9 months)	$13,300	$14,000	$14,500	$15,700	$17,100
Research (9 months)	8,000	8,600		13,200	13,700
Teaching or Teaching & Research (12 months)	15,500	17,000	18,500	19,500	19,500
Research (12 months)	13,000	15,600	18,500	17,400	18,000
Business & Industry (12 months)	20,500	21,000	24,000	25,400	28,400
Government (12 months)	19,400	18,700	22,000	24,300	24,400

NOTE: Blanks indicate that not enough returns were received to warrant including the figures.

SOURCE: Battelle, Columbus Laboratories, 1978 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1980.

Table 19

NUMBER AND MEAN MONTHLY STARTING SALARIES OF NONSUPERVISORY EMPLOYEES ENGAGED IN R & D ACTIVITIES BY FIELD OF DEGREE AND DEGREE LEVEL, 1980

FIELD OF DEGREE	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	Number	Salary	Number	Salary	Number	Salary
Engineering	1,004	$1,728	79	$1,951	22	$2,223
Chemistry	68	1,293	3	1,767	16	2,031
Physics	26	1,623			7	2,286
Life Sciences	11	1,045	2	1,550	10	1,550
Math & Statistics	97	1,573	7	1,800	3	2,200
Social Sciences	6	1,417	3	1,600	4	1,975

Table 20

NUMBER AND MEAN STARTING SALARIES OF NONSUPERVISORY ENGINEERING BACHELOR'S DEGREE EMPLOYEES ENGAGED IN R & D ACTIVITIES BY WORKING-AS-OCCUPATION, 1980

WORKING-AS-OCCUPATION	NUMBER	SALARY
Aeronautical Engineering	61	$1,685
Chemical Engineering	55	1,791
Electrical Engineering	582	1,725
Materials Engineering	6	1,650
Mechanical Engineering	137	1,769
Metallurgical Engineering	15	1,747
Nuclear Engineering	14	1,707

SOURCE: Engineering Manpower Commission, The Placement of Engineering and Technology Graduates 1980, December, 1980.

Table 21

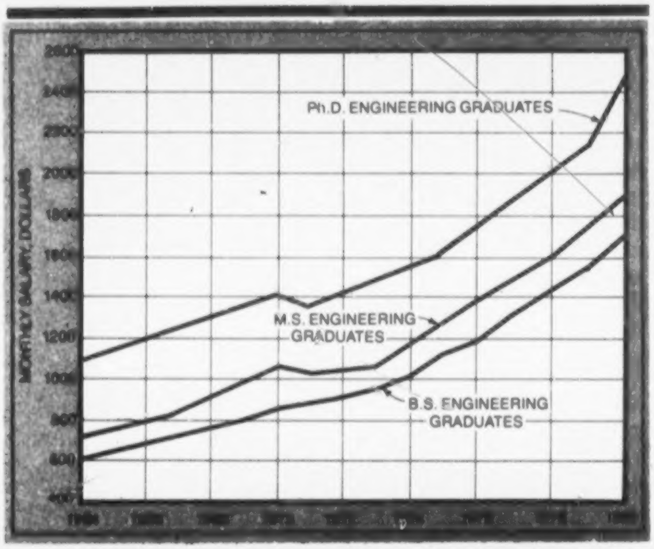
STARTING SALARIES OF ENGINEERING GRADUATES BY CURRICULUM AND DEGREE LEVEL, 1980

Curriculum	DEGREE LEVEL		
	B.S.	M.S.	Ph.D.
Aeronautical	$1,648	$1,881	$2,268
Architectural	1,388		
Chemical	1,809	1,913	2,384
Civil	1,570	1,775	2,051
Computer	1,689	1,936	2,253
Electrical	1,699	1,906	2,352
Mechanical	1,710	1,898	2,289
Metallurgical	1,749	1,871	2,255
Mining, Geological	1,745	1,887	1,986
Naval, Marine	1,657	1,936	
Nuclear	1,680	1,830	2,255
Petroleum	1,989	1,900	
Overall	1,711	1,890	2,275

SOURCE: "Engineers' Salaries - An Update", Mechanical Engineering, March 1981.

Chart 2

TRENDS IN STARTING SALARIES TO ENGINEERING GRADUATES BY DEGREE LEVEL, 1964-1980



SOURCE: Engineering Manpower Commission, The Placement of Engineering and Technology Graduates 1980, December 1980.

Table 22

NUMBER AND MEAN MONTHLY STARTING SALARIES OF BACHELOR'S DEGREE TECHNOLOGY GRADUATES BY CURRICULUM, 1980

Curriculum	No. of Schools	No. of Salaries	Mean Non-ABET Schools*	Mean ABET Schools*	Overall Mean
Aerospace	2	8	$1,666	$1,413	$1,540
Air Conditioning	1	23		1,589	1,589
Architectural	3	27	1,666	1,256	1,271
Automotive Engineering Technology	3	23	1,673	1,249	1,323
Civil	20	161	1,691	1,366	1,408
Chemical Engineering Technology	1	14	1,130		1,730
Computer	8	82	1,510	1,511	1,510
Drafting & Design Technology	5	58	1,309	1,590	1,488
Electrical	30	486	1,476	1,638	1,618
Electronic	21	345	1,500	1,541	1,525
Industrial	16	406	1,447	1,562	1,511
Manufacturing	12	73	1,595	1,567	1,575
Mechanical	37	413	1,508	1,627	1,601
Nuclear Technology	2	27	1,621	1,488	1,513
Other	26	317	1,194	1,517	1,361
Total	187	2,463	1,435	1,544	1,505

Table 23

NUMBER AND MEAN MONTHLY STARTING SALARIES OF ASSOCIATE DEGREE TECHNOLOGY GRADUATES BY CURRICULUM, 1980

Curriculum	No. of Schools	No. of Salaries	Mean Non-ABET Schools*	Mean ABET Schools*	Overall Mean
Aero. Engineering Technology*	1	7	$	$1,264	$1,264
Air Conditioning	7	109	1,091	1,137	1,103
Architectural	16	149	922	912	919
Automotive	13	178	925	1,052	988
Chemical	11	85	1,263	1,141	1,173
Civil	30	206	1,082	1,108	1,098
Computer	18	165	1,078	1,033	1,116
Drafting	23	233	965	1,083	1,011
Electrical	27	379	1,062	1,234	1,183
Electronic	39	880	1,120	1,120	1,120
Industrial*	7	46	1,305	1,188	1,226
Manufacturing*	7	57	995	921	949
Mechanical	32	1,307	1,164	1,188	1,175
Nuclear*	1	8		1,377	1,377
Other	19	139	1,092	1,131	1,108
Total	251	2,948	1,079	1,136	1,105

* ABET schools are those having at least one engineering technology curriculum accredited by the Accreditation Board for Engineering and Technology, Inc. (ABET). Specific curricula for these Schools may or may not be accredited.

SOURCE: U.S. Department of Labor, Occupational Outlook Handbook, 80-81 Edition.

Table 24

STARTING SALARIES OF SCIENTISTS BY FIELD, TYPE OF EMPLOYER AND HIGHEST DEGREE ATTAINED, 1978-79

FIELD	Estimated Number Employed in 1978	TYPE OF EMPLOYER					
		1978 Private Industry			1979 Federal Government		
		B. S.	M. S.	Ph.D.	B. S.	M. S.	Ph.D.
Engineers	1,100,000	$16,800	$18,700	$24,000	$13,657-16,920	$ 18,044	$ 19,263
Mathematicians	33,000	14,800	17,000	22,500	10,507-13,014	15,920-19,263	19,263-23,087
Statisticians	23,000				10,507-13,014	15,920-19,263	19,263-23,087
Life Scientists	215,000				10,507-13,014	13,014-15,920	19,263-23,087
Agricultural	40,000	11,500			10,507-13,014	13,014-15,920	19,263-23,087
Biological	110,000	12,400			10,507-13,014	13,014-15,920	19,263-23,087
Biochemists	20,000	17,000	21,000	28,000	10,507-13,014	13,014-15,920	19,263-23,087
Foresters	25,000	12,000			10,507	13,014	15,920-19,263
Geologists	31,000	15,400	19,000		10,507-13,014	13,014-15,920	19,263-23,087
Geophysicists	11,000	15,400	19,000		10,507-13,014	13,014-15,920	19,263-23,087
Meteorologists	7,300				10,507-13,014	13,014-15,920	19,263-23,087
Chemists	140,000	13,500	15,600	21,500	10,507-13,014	15,920	19,263-23,087
Physicists	40,000		17,400	23,000	10,507-13,014	13,014-15,920	19,263-23,087
Astronomers	2,000						19,263-23,087
Oceanographers	3,600				10,507-13,014	15,920-19,263	19,263-23,087
Psychologists	130,000	10,700	13,200		10,507-13,014	15,920	19,263
Anthropologists	7,000	10,700	13,200		10,507-13,014	15,920	19,263
Economists	130,000	12,200	13,200		10,507-13,014	15,920	19,263
Political Scientists	14,000	10,700	13,200		10,507-13,014	15,920	19,263
Sociologists	19,000	10,700	13,200		10,507-13,014	15,920	19,263
Programmers	247,000	240-250**			200**		
Geographers	10,000	10,700	13,200		10,507-13,014	15,920	19,263

** Weekly Earnings.

SOURCE: Robert Half of New York, Inc., Financial & Data Processing Prevailing Starting Salaries, 1981.

Table 25

AVERAGE STARTING SALARY RANGES OF DATA PROCESSING PERSONNEL BY POSITION AND COMPANY SIZE, 1980 AND 1981

POSITION AND COMPANY SIZE	SALARY RANGES		% Change
	1980	1981	
COMPUTER OPERATOR			
Large Companies	$12,500-15,000	$13,500-16,500	9.1
Medium Companies	11,500-15,000	12,500-16,500	9.4
Small Companies	11,000-14,000	11,700-15,000	6.8
OPERATIONS MANAGER			
Large Companies	22,000-29,500	23,000-32,000	6.8
Medium Companies	17,500-22,000	19,000-26,000	13.9
PROGRAMMER*			
Large Companies	14,500-17,500	15,500-19,000	7.8
Medium Companies	14,500-16,000	15,000-18,500	9.8
Small Companies	12,000-15,000	13,700-16,000	10.0
PROGRAMMER/ANALYST			
Large Companies	18,500-24,000	18,500-25,500	3.5
Medium Companies	18,000-24,000	18,500-26,000	6.0
Small Companies	15,000-19,500	17,000-23,000	15.9
PROGRAMMER-LEAD OR SENIOR			
Large Companies	21,500-26,000	22,500-27,000	4.2
Medium Companies	19,000-23,000	20,000-25,000	7.1
SYSTEMS SOFTWARE PROGRAMMER			
Large Companies	22,500-28,000	23,000-31,000	6.9
Medium Companies	21,000-25,500	23,000-28,000	9.7
SYSTEMS ANALYST			
Large Companies	22,000-28,000	24,000-30,000	8.0
Medium Companies	21,000-25,500	23,500-29,000	12.9
Small Companies	19,000-23,500	20,000-25,000	5.9
DATA BASE ADMINISTRATOR			
Large Companies	23,500-30,000	24,500-31,000	3.7
Medium Companies	22,000-27,000	24,500-29,000	9.2
EDP AUDITOR			
Large Companies	22,000-33,000	23,000-35,500	5.5
Medium Companies	22,000-28,000	23,500-30,000	7.0
PROJECT MANAGER			
Large Companies	24,000-30,000	26,000-33,000	9.3
Medium Companies	22,500-27,500	24,000-30,000	8.0
SYSTEMS ANALYST MANAGER			
Large Companies	25,500-32,000	27,000-35,000	8.8
Medium Companies	23,500-28,000	26,000-30,000	8.7
DIRECTOR DATA PROCESSING			
Large Companies	33,000-50,000	35,000-53,000	6.0
Medium Companies	28,000-35,000	30,000-42,000	14.3
MANAGER DATA PROCESSING			
Small Companies	22,000-29,000	23,000-32,000	7.8

* 0-1 Years Experience

SOURCE: Middle Atlantic Career Counseling Association, Starting Salary Offers to Graduates of Two-Year Colleges, 1979-80.

Table 26

STARTING SALARY OFFERS TO GRADUATES OF TWO-YEAR COLLEGES BY CURRICULUM, 1978-79 and 1979-80

BY CURRICULUM FOR ALL TYPES OF EMPLOYERS	No. Offers	Average Weekly Offers		1979-80 Average Weekly Salary Annualized
	1979-80 Total	1979-80 Total	1978-79 Total	
AGRICULTURE				
Agricultural Engineering	26	$185	*	$9,620
Animal Husbandry	30	171	*	8,892
Food Science	28	196	187	10,192
Plant Science	61	177	*	9,204
Other	68	177	*	9,204
BUSINESS				
Accounting	77	182	185	9,464
Business, General	37	194	166	10,088
Marketing	15	192	167	9,984
Retail	15	213	*	11,076
Secretarial Science	271	164	173	8,528
Other	41	176	167	9,152
SOCIAL SCIENCE				
Child Care	12	152	122	7,906
Police Science	9	225	158	11,700
Other	10	198	168	10,296
HEALTH PROFESSION				
Dental Technology	22	183	220	9,516
Medical Technology	20	168	200	8,736
Nursing	124	232	219	12,064
X-Ray Technology	11	221	195	11,492
Other	29	201	173	10,452
TECHNOLOGY				
Automotive	50	210	*	10,920
Biology	7	178	227	9,256
Bio-medical	8	213	*	11,076
Chemistry	42	272	230	14,144
Civil Engineering	25	249	196	12,948
Computer Science & Data Processing	100	252	213	13,104
Drafting	19	242	217	12,584
Electrical and Electronics	221	264	237	13,728
Environmental Science	4	227	176	11,804
Mechanical and Mechanical Design	146	267	239	11,908
Surveying	13	229	*	13,884
Other	13	296	191	15,392
LIBERAL ARTS				
Commercial Art	12	157	153	8,164
General Degree	10	213	173	11,076
Other	15	199	163	10,348
TOTAL	1,741			

* Data not available for prior year.

SOURCE: Middle Atlantic Career Counseling Association, Starting Salary Offers to Graduates of Two-Year Colleges, 1979-80.

Table 27

STARTING SALARY OFFERS TO GRADUATES OF TWO-YEAR COLLEGES BY TYPE OF EMPLOYER, 1978-79 and 1979-80

TYPE OF EMPLOYER	NO. OFFERS 1979-80 TOTAL	AVERAGE WEEKLY OFFERS		1979-80 AVER. WEEKLY SALARY ANNUALIZED
		1979-80 TOTAL	1978-79 TOTAL	
Accounting	13	$177	$174	$9,204
Aerospace and Components	25	274	230	14,248
Agriculture & Farming	65	176		9,152
Automotive & Mechanical Equipment	59	212	201	11,024
Banking, Finance, Insurance	78	195	173	10,140
Building Materials Manufacture and Construction	60	212	206	11,024
Chemicals, Drugs & Allied Products	134	251	219	13,052
Communications	31	244		12,688
Dentists	19	191	220	9,932
Electrical Machinery and Equipment	105	241	226	12,532
Electronics and Instruments	134	257	237	13,364
Food & Beverage Processing	25	202	181	10,504
Glass, Paper, Packaging and Allied Products	30	229	207	11,908
Hotel/Restaurant	32	188	191	9,776
Hospitals	187	221	205	11,492
Lawyers	68	166	156	8,632
Merchandising and Retail Services	80	182	156	9,464
Metals and Metal Products	27	291	213	15,132
Nursing Homes	15	192	180	9,984
Petroleum and Allied Products	26	246	244	12,792
Physicians	18	172	155	8,944
Research and/or Consulting Organizations	71	251	211	13,052
Textile Industry	3	143	190	7,436
Utilities - Public (including Transportation)	28	245	211	12,740
Government - Federal	23	204	218	10,608
Government - Local and State	62	195	186	10,140
Non-Profit Organizations and Educational Institutions	65	186	166	9,672
Other	238	252	178	13,104
TOTAL	1,741			

SALARIES OF EXPERIENCED SCIENTIFIC AND TECHNICAL PERSONNEL

- Three subsystems make up the *Scientific and Technical Personnel Characteristics System (STPCS)* of the *National Science Foundation* which produces estimates for the total U.S. science and engineering population. The *Experienced Sample of Scientists and Engineers* covered about 150,000 individuals in 1972, who were identified by NSF as scientists or engineers; and 50,000 individuals in 1974, 1976 and 1978. Data on this 3-5 percent sample of individuals who were in the labor force in 1970, were collected by the *Bureau of the Census* for the NSF. The *Roster of Doctoral Scientists and Engineers*, maintained by the *National Research Council*, consists of all known doctoral scientists and engineers in the U.S. starting with those of 1930. The roster serves as a source for a 20% sample of about 60,000 doctoral scientists and engineeers surveyed biennially to provide data on the doctoral population of the U.S. The last subsystem, the *New Entrants Survey*, provides information on the number and characteristics of scientific and technical personnel entering the labor force after 1970.

The 1978 median annual salary for all scientists and engineers who were in the labor force by 1970 was $27,200. Earth scientists earned the highest salary - $30,600, followed by economists at $30,500. 1978 annual salaries by field and years of professional experience for experienced scientists and engineers are shown in Table 28.

By type of employer, those experienced scientists and engineers working for the federal government reported the highest salaries - $28,900, followed by those employed by business and industry at $27,500. Economists working for the federal government reported the highest salary of $33,800, while agricultural scientists working for state government had the lowest salaries - $17,100 (Table 29).

Approximately 630,000 U.S. scientists and engineers earned doctorates between 1920 and 1979, of whom an estimated 332,280 were employed full-time in 1979, according to data collected by the *National Academy of Sciences/National Research Council* for the *STPCS* of the *National Science Foundation*. Data from *CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES, 1979* show that business and industry pay the highest salary to doctoral scientists and engineers - $33,800 - followed by the federal government at $33,400 - about 15% higher than the overall median salary of $29,100. Salaries paid by state governments were the lowest of all, approximately 19% below the overall median (Table 30). Table 31 presents detailed data on salaries paid to doctoral scientists and engineers employed in business and industry in 1975, 1977 and 1979 showing a 30% total increase in the five years covered. The largest dollar increase is for doctoral engineers, the smallest for social scientists.

Teaching, the most dominant work activity of doctoral scientists and engineers, continues to provide the lowest annual salaries. In 1979, the median annual salary of Ph.D.'s who reported teaching as their primary work activity was $25,200, $10,700 below that of doctoral scientists and engineers who reported the management or administration of R & D as their primary work activity. Economists engaged in management or administration had the highest median salary - $40,200 (Table 32).

By geographic area, doctoral scientists and engineers working in the middle Atlantic region reported the highest median annual salaries, while those working in the east south central region reported the lowest. Engineers working in the middle Atlantic region reported the highest salaries - $35,400 (Table 33). Median annual salaries of doctoral scientists and engineers by years of professional experience and by age are presented in Tables 34 and 35.

Women were only 9.3% of the doctoral scientists and engineers employed full-time in 1979 and earned considerably less than their male counterparts regardless of field. Women doctoral scientists and engineers reported median salaries 22.7% below those reported by men in 1979. Women doctoral economists and male doctoral engineers reported the highest salaries in 1979 - $26,900 and $33,200 respectively. Among minority groups, Asians reported the highest salaries - $28,200 (Table 36).

In the third part of the *STPCS* system - the *New Entrants* - data show that women continue to earn less than their male counterparts even two years out of their degree. In 1980, the science and engineering female bachelor's graduates of 1978 earned $4,400 less than their male counterparts, while S/E female master's graduates of that year earned $7,600 less. The salary gap exists in almost every field at both degree levels (Table 37). 1979 Median annual salaries of 1977 science/engineering graduates by field of degree and S/E employment status are shown in Tables 38 and 39.

- The 1980 *NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES* which is conducted annually by the *Battelle Columbus Laboratories for the U.S. Department of Energy,* presents salary data from 339 establishments covering 91,315 scientists and engineers spending more than half of their time in research and development activities.

By working-as-occupation, mining and petroleum engineers reported the highest mean monthly salary at all three degree levels among nonsupervisory scientists and engineers working in R & D. Agricultural and biological scientists had the lowest mean monthly salary, at bachelor's and master's degree levels, and psychologists the lowest at the Ph.D. level (Tables 40, 41 and 42).

By type of establishment, bachelor's degree nonsupervisory scientists and engineers working at federal establishments earned the most, while master's and doctoral degree personnel working in industry reported the highest monthly salaries (Table 43).

By highest degree field, physicists at the bachelor's level, and engineers at the master's and doctorate level reported the highest monthly salaries in 1980. Life scientists at all three degree levels reported the lowest salaries (Table 44).

Women continue to earn substantially less than their male counterparts working in R & D regardless of field or work experience (Table 45). Of professional degreed scientists and engineers working in research and development, those with a doctor's degree in dental science reported the highest salary - $3,160 per month (Table 46).

- Another survey of scientists and engineers engaged in R & D activities by *INDUSTRIAL RESEARCH* finds that the median annual income in 1981 increased an average 9.6% from 1980 and now stands at $31,221. Biologists reported the highest percentage increase - 14.2% - and aeronautical engineers the lowest - 5.3%. Mathematicians earned the highest salaries in 1981 - $35,750, while industrial engineers earned the least - $28,750 (Table 47). By degree level, doctorates reported the lowest percentage increase - 9.0% - while bachelor's had the highest - 10.3% (Table 48).

Scientists and engineers working in R & D reach their maximum salary levels after 36-40 years of experience and then decline. Salaries of these professionals by years of experience comparing 1979 through 1981 are shown in Chart 3.

The value of an advanced degree has increased. In 1981, the advantage in annual income for a Ph.D. over less-than-bachelor's degree is $9,994, compared with 1980's $9,253; while the value of a Ph.D. over a bachelor's degree is $6,148 in 1981 compared to $5,943 in 1980. Salaries of Scientists and Engineers Employed in R & D by degree level are shown in Chart 4 for years 1979 through 1981, while Chart 5 shows salaries of scientists and engineers in R & D and the percent of the respondents at that salary level from 1979 through 1981.

Although women made tremendous salary gains from 1980 to 1981 - up 19% overall - they still have a long way to go. More than 78% of the women respondents to the *INDUSTRIAL RESEARCH & DEVELOPMENT* survey earn less than $31,000 per year; just over half that percentage of men are in that salary range. Looking at it from the other side, only 22% of the women respondents earn $31,000 or more while 53% of the men do. However, not all the salary discrepancies can be blamed on sex discrimination. Women in R & D have fallen far short of men in categories of education, experience and longevity (Chart 6). By type of employer, male scientists and engineers working in industry earned $31,730 compared to $24,567 for women; in government, $32,405 compared to $27,200 and in universities, $29,006 compared to $23,750. Salaries of all scientists and engineers employed in R & D by type of employer for 1981 are shown in Chart 7.

• Average salaries for selected white-collar occupations in private industry increased sharply during the year ended March 1981, acording to data from the annual *NATIONAL SURVEY OF PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL PAY* conducted by the *Bureau of Labor Statistics* of the *U. S. Department of Labor*. The 1980-81 occupational increases typically fell in the 9-11 percent range compared with annual averages of 7 to 8 percent over the 1975-80 period and of 6 to 7 percent over the 1970-75 period. March 1981 average salaries for eight levels of engineers, the largest professional group studied, ranged from $21,712 for college graduates in trainee positions to $56,828 for those responsible for highly complex engineering programs. Chemists' salaries ranged from $18,092 to $41,911, while salaries for accountants ranged from $20,153 at the entry level to $44,494 at the supervisory level (Table 49). Table 50 presents similar data for the March 1980 period for comparison.

• The fifth annual *SCIENTIFIC SALARIES' SURVEY* conducted by *D. Dietrich Associates, Inc.* finds an average salary of $29,339 for the 5,855 scientists reported by 107 firms. These salaries ranged from a weighted average salary of $17,831 at the entry level to $51,805 for the scientist who was a department head (Table 51).

As is shown in other surveys, where a scientist works is a determinant of salary. Scientists at the entry level tended to have higher salaries working in utilities and lower salaries working in government. However, overall, scientists working in industry reported the highest salaries - $29,893, while those working in government reported the lowest - $24,009 (Table 52).

• The 1981 salary survey of experienced chemists and chemical engineers, conducted annually by the *American Chemical Society*, finds that the median annual salary for chemists increased 11% between March 1980 and March 1981. The median had increased 7% in 1980, and had been rising only about 6 to 7 percent a year during most of the past ten years. The biggest increase this year is for chemists whose highest degree is an M.S., while the smallest is for chemists with no more than a B.S.

Chemists' salaries also increased more than those for chemical engineers, a reversal of the usual trend. Nevertheless, median salaries of chemical engineers are about 20 to 30 percent higher at all degree levels than those of chemists. For comparison, during the period from March 1980 to March 1981, the Consumer Price Index climbed 10.5%. Trends in median salaries for chemists and chemical engineers by degree level are shown in Table. 53.

Sex is a determinant of salary levels. The median salary for women working in industry is only 71% of that for men if they both have a B.S. degree and 78% if they have earned a Ph.D. These percentages have not changed appreciably during the past five years. In fact, in 1981, the percentage differences are slightly lower than they were in 1980. The salary differentials by sex are evident not only for those chemists working in industry, but are found in every employing sector of the chemical marketplace (Table 54).

Some of these salary discrepancies between the sexes can be explained by the fact that women as a group have considerably less work experience than men. Among nonacademic chemists with a B.S. degree, only 53% of the women surveyed by the American Chemical Society have advanced beyond the bachelor's level, whereas 70% of the men have done so. Additionally, almost two thirds of the women graduated less than 10 years ago and only a fifth have worked for 20 years or more. For similar men, less than a third have less than 10 years of experience and close to half have 20 years or more. This difference in years of experience is true for all nonacademic chemists at all degree levels (Table 55).

However, differences between median salaries are considerably smaller for relatively recent graduates. Among Ph.D. chemists working in industry, for example, the median is the about the same - $30,000 if they are about 5-9 years beyond their B.S. degree. For industrial chemists who do not have a degree beyond the B.S. level, median salaries for women are only 5 to 7 percent less than those for men if they graduated less than 10 years ago, although they fall more than 20% below men's salaries if 15 to 19 years have passed since they received their degree (Table 56).

Factors other than experience also are involved in determining salary levels. Management jobs tend to be the highest-paying positions for chemists in industry. Whereas 28% of the men working in industry consider themselves to be either general managers or managers of research and development, only 13% of the women work as managers (Table 57).

Similarly, industrial chemists whose specialty is analytical chemistry tend to have lower salaries than those who work in other areas of chemistry. Whereas 36% of the women chemists in industry are analytical chemists, only 21% of the men are (Table 58).

Geographic region is also a factor in salary levels. Generally, chemists at all degree levels earn more along the Atlantic seaboard (Table 59). Table 60 presents additional geographic salary information for selected states.

As noted earlier, those chemists working in industry have higher salaries than do other chemists. A comparison of salaries paid chemists working in industry with all chemists is shown in Table 61.

Table 62 presents salaries paid ACS-member chemical engineers by degree level and years since B.S. As shown previously, chemical engineers have higher salaries than do chemists.

- Members of the *American Institute of Chemists* tend to earn high salaries than the average chemist or chemical engineer, according to the 1980 salary survey of the AIC. Overall, B.S. chemists reported a median annual salary of $28,000; M.S. chemists, $31,500; and doctoral chemists, $37,000.

Median annual salaries are highest for AIC members working in the Middle Atlantic region - in part, because this is the heartland of the chemical industry and thus tends to attract more chemists and pay them better (Table 63). This is reflected in the finding that chemists in industry are paid more than chemists in any other employer setting, although chemists in government were almost as well compensated (Table 64).

As was true in the survey by the American Chemical Society of its membership, AIC finds that chemical specialty enters into salary levels. Organic chemists reported the highest median salaries. Interestingly, the largest proportion of AIC members were involved in analytical chemistry, as was true in the American Chemical Society survey. Likewise, the proportion of organic chemists was found to be about the same between the two surveys - 17% (Table 65).

It is not surprising that chemists in management are best paid, while those in teaching are paid the least (Table 66).

- The first salary survey by the *American Psychological Association* found that those APA psychologists working in business or consulting firms earn the highest salaries regardless of years of experience, while those working in community mental health centers earn the least (Table 67).

- The median salary for members of the *Institute of Food Technologists* was $24,000-$25,999. As expected, the median salary range increases with increasing years of experience and degree level. The median salary for those with a Ph.D. is about $4,000 higher than for those with an M.S., pointing up the economic value of an advanced degree. However, there is a marked difference in median salary by sex, with women making $2,000-$12,000 less than men with the same degrees and years of experience (Table 68).

Food scientists/technologists earn most working in industry, and least in education - a finding collaborated by every other salary survey in this report. This is true regardless of years of experience and degree level (Table 69).

By geographic area, median salaries for all degrees were highest in the Middle Atlantic states, and were as much as $6,000 lower for B.S. and M.S. degrees and as much as $8,000 lower for Ph.D. degrees in the other geographic divisions (Table 70).

- Salaries of degreed geologists, geophysicists, production engineers and landmen ("earth scientists"), as a group, are the highest of almost any professional occupation in the United States, according to various salary studies compiled by *Vine Associates* during the past four years. Degreed earth scientists have seen their salaries rocket 215% since 1973 compared to a rise in the Consumer Price Index of 92.5%. Salary ranges of earth scientists employed in the petroleum industry by years of experience for 1980 are shown in Table 71.

- The shortage of experienced data processing personnel, particularly in programming and systems analysis, continues to have a greater than inflationary effect in the upward movement of salaries, according to the results of the *INFOSYSTEMS'* 23rd annual DP salary survey. Thirty-five occupational DP groups were including in the survey, with results based on replies from 15,096 workers in 913 DP operations. Overall, there was an increase of 12.8% for the occupational groups surveyed, with the largest increases reported for the top people in the systems analysis and programming categories. Average and median salaries by job category for 1981 are shown in Table 72.

There is no single geographic section of the country where all data processing personnel earn the highest salary - there is variance by occupational job title. These salaries are presented in Table 73.

- Salary levels for computer professionals have continued to increase across the board, according to the 1981 *Computer Salary Survey* by *SOURCE EDP*. The 1981 survey is based on an analysis of data from 35,000 computer professionals in over 15,000 organizations across the U.S. Salaries differ for computer professionals depending upon type of position, length of experience, size of computer systems and whether in management or non-management. Tables 74 and 75 present median salaries of computer personnel by these variables.

- Data collected from 498,760 employees from 5,970 companies in 122 cities throughout the United States and Canada on salaries for selected data processing and clerical positions by the *American Administrative Menagement Society*, finds that the average weekly salary for the four data processing positions in the survey is $276. This average salary varies by position and geographic region, with the highest salaries going to programmer/analysts working in the Western U.S. states (Table 76).

Where computer personnel work is a factor in salary determination. Highest salaries are paid by manufacturing/processing organizations, and lowest by government (all levels) as shown in Table 77. Salaries are higher in Canada than in the U.S. for all four data processing positions studied in this survey.

- Level of responsibility for all computer professionals is a major factor in salaries, according to the 1980 compensation survey conducted by the *Association of Data Processing Services Organization*. Highest salaries are commanded by lead applications programmer/analysts working in the Northeast section of the U.S., and for systems/softward programmer/analysts working in the Midwest as well as the Northeast (Tables 78 and 79).

• A survey conducted by the *U.S. Department of Labor, Bureau of Labor Statistics* finds that small sex differences exist in salaries paid to selected technical occupations in the Washington, D. C. metropolitan area. These salaries are shown in Table 80.

• Salary information collected by the *American Institute of Physics* reveals that the median annual salary in 1980 for physicists who were members of the AIP was $32,000, about $4,000 higher than in 1979. While the median salary for doctorate-level physicists was higher than for bachelor's degreed physicists, their average salaries were nearly identical (Table 81).

As was true for other technical personnel, physicists whose principal work activity is administration commanded the highest salaries, while those engaged in teaching received the lowest (Table 82).

Not suprisingly, those doctorate-level physicists who have more experience earn higher salaries as shown in Table 83.

By type of employer, physicists working in industry had the highest average salaries, although those working in government had the highest median salaries. Not unexpectedly, physicists employed by colleges had the lowest salaries (Table 84).

Whether employed in the academic sector or the nonacademic sector, women physicists had lower salaries than their male counterparts (Table 85).

By geographic region, physicists working in the Pacific area reported the highest median salaries, while those working in the west north central reported the lowest (Table 86).

• Average annual salaries for selected technical positions in state and territorial public health laboratories are collected by the *U.S. Department of Health and Human Services, Public Health Service*. As was true in previous years, the 1981 survey finds Alaska leading all states in paying their technical personnel (Table 87).

Average annual salaries paid technical personnel in public health laboratories range from a high to Lab directors to a low for entering lab aides. During the five year period from 1976-1981, however, entering lab aides experienced the highest percentage increase in their salaries, while top level chemists received the lowest percentage increase (Table 88).

SOURCE: National Science Foundation, Characteristics of Experienced Scientists and Engineers, 1978, NSF 79-322.

Table 28

1978 MEDIAN ANNUAL SALARIES OF SCIENTISTS AND ENGINEERS WHO WERE IN THE LABOR FORCE IN 1970 BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE

FIELD	YEARS OF PROFESSIONAL EXPERIENCE										
	Total	5 or less	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41+	Not Reported
PHYSICAL SCIENTISTS	$27,600	$21,400	$23,900	$26,300	$28,000	$30,400	$30,600	$31,900	$34,100	$35,400	$30,100
Chemists	26,700	21,400	22,500	25,600	26,800	29,400	29,800	31,000	32,900	35,500	*
Physicists/Astronomers	29,300	21,400	24,500	27,600	30,700	33,000	33,800	35,700	39,300	*	*
Other Physical Scientists	28,900	*	26,500	27,000	29,200	32,300	32,700	*	*	*	*
MATHEMATICAL SCIENTISTS	27,500	18,300	23,400	26,300	28,700	32,400	33,000	33,300	33,300	*	*
Mathematicians	27,500	*	22,800	26,300	28,400	32,700	31,900	33,400	31,100	*	*
Statisticians	27,500	*	24,200	26,400	30,700	29,000	35,600	33,000	*	*	*
COMPUTER SCIENTISTS	25,900	20,300	23,600	25,800	28,300	30,000	29,500	*	*	*	*
ENVIRONMENTAL SCIENTISTS	30,400	23,200	24,000	27,100	29,000	34,400	34,800	33,700	33,700	*	*
Earth Scientists	30,600	*	24,200	26,200	29,700	35,100	35,300	33,400	33,100	*	*
Oceanographers	26,800	*	*	29,000	*	*	*	*	*	*	*
Atmospheric Scientists	29,700	*	*	28,700	28,700	31,500	29,900	*	*	*	*
ENGINEERS	27,400	22,200	23,800	26,000	28,000	28,700	30,100	30,500	30,300	27,200	24,300
LIFE SCIENTISTS	24,900	19,500	21,900	24,200	25,700	26,300	28,100	30,500	28,900	33,700	*
Biological Scientists	25,200	20,100	21,800	24,300	27,400	27,400	28,900	30,600	29,800	*	*
Agricultural Scientists	23,800	*	20,300	22,000	24,200	24,900	27,000	25,000	25,400	*	*
Medical Scientists	28,900	*	24,100	30,000	29,300	29,700	34,100	40,900	*	*	*
PSYCHOLOGISTS	26,500	21,300	24,100	25,000	28,300	30,200	33,500	33,600	31,600	32,200	*
SOCIAL SCIENTISTS	27,600	20,400	22,800	26,800	29,600	30,900	33,700	31,100	42,000	*	*
Economists	30,500	*	25,100	29,500	32,300	34,100	36,600	30,800	41,900	*	*
Sociologists/Anthropologists	25,900	*	22,200	24,800	28,400	28,100	32,200	*	*	*	*
Other Social Scientists	26,400	*	22,200	26,000	28,300	27,000	31,800	*	*	*	*
TOTAL ALL FIELDS	27,200	21,000	23,500	25,900	28,000	29,200	30,300	30,700	30,700	28,800	25,300

* Less than 20 sample cases reported.

SOURCE: National Science Foundation, Characteristics of Experienced Scientists and Engineers, 1978, NSF 79-322

Table 29

1978 MEDIAN ANNUAL SALARIES OF SCIENTISTS AND ENGINEERS WHO WERE IN THE LABOR FORCE IN 1970 BY FIELD AND TYPE OF EMPLOYER

FIELD	TYPE OF EMPLOYER							
	Business & Industry	4-Year College/ University	2-Year College	Non-Profit Organi- zation	Federal Govern- ment	State Govern- ment	Other Govern- ment	Other
PHYSICAL SCIENTISTS	$28,400	$26,300	$24,400	$28,600	$29,500	$18,900	$25,000	$22,600
Chemists	27,500	26,100	24,700	25,300	27,600	18,700	22,100	22,100
Physicists/Astronomers	31,000	26,500	24,700	30,300	31,100	*	29,700	*
Other Physical Scientists	30,300	27,100	*	*	29,900	*	*	*
MATHEMATICAL SCIENTISTS	29,300	26,700	22,500	28,200	29,500	18,800	27,300	*
Mathematicians	30,000	26,300	22,700	28,400	30,200	*	27,500	*
Statisticians	26,800	28,700	*	*	28,700	*	*	*
COMPUTER SPECIALISTS	26,000	23,400	*	24,400	28,900	20,100	26,100	25,300
ENVIRONMENTAL SCIENTISTS	33,400	27,500	26,400	*	29,500	20,700	29,300	*
Earth Scientists	33,600	27,100	26,400	*	28,400	20,700	29,300	*
Oceanographers	*	*	*	*	30,100	*	*	*
Atmospheric Scientists	28,600	28,400	*	*	30,500	*	*	*
ENGINEERS	27,400	27,600	21,500	29,700	29,700	23,300	25,900	25,600
LIFE SCIENTISTS	26,300	26,000	22,400	23,200	24,200	18,300	23,000	20,300
Biological Scientists	25,900	25,700	22,200	22,900	26,500	19,400	22,800	24,400
Agricultural Scientists	25,800	25,000	*	*	23,200	17,100	23,200	*
Medical Scientists	30,700	30,200	*	*	30,500	*	*	19,600
PSYCHOLOGISTS	30,600	26,700	26,300	23,300	32,800	24,300	24,100	25,400
SOCIAL SCIENTISTS	30,600	26,800	22,100	22,200	32,900	22,900	26,600	25,900
Economists	32,200	28,200	*	*	33,800	25,200	38,000	*
Sociologists/Anthropologists	25,800	26,600	22,700	*	27,900	*	*	*
Other Social Scientists	28,600	26,500	*	22,800	32,000	23,000	21,400	25,300
TOTAL, ALL FIELDS	27,500	26,600	22,700	27,700	28,900	22,300	25,800	25,200

* Less than 20 sample cases reported.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323.

Table 30

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER, 1979

FIELD	TOTAL	TYPE OF EMPLOYER								
		Business & Industry	EDUCATIONAL INSTITUTIONS				Hospital/ Clinic	Non-Profit Organi-zation	Federal Govern-ment	State Govern-ment
			Total	4-Year Colleges	2-Year Colleges	Elem./ Sec. School				
ALL FIELDS	$29,100	$33,800	$26,400	$26,400	$24,600	$25,800	$26,200	$30,300	$33,400	$23,500
PHYSICAL SCIENTISTS	30,300	33,100	26,500	26,800	24,000	15,900	32,900	29,300	33,200	
Chemists	30,400	32,900	25,400	25,700	24,500	15,900	28,200	27,900	32,900	
Physicists/Astronomers	30,100	34,000	27,700	27,900				31,200	33,300	
MATHEMATICAL SCIENTISTS	26,300	30,800	25,500	25,600	22,200			30,600	36,300	
Mathematicians	26,100	30,900	25,300	25,500	22,600			30,300	38,500	
Statisticians	29,300		26,700	27,000						
COMPUTER SPECIALISTS	28,500	29,600	25,400	25,500						
ENVIRONMENTAL SCIENTISTS	30,300	34,000	26,700	26,800				30,000	35,300	22,500
Earth Scientists	30,300	34,100	26,700	26,800				28,700	36,000	21,600
Oceanographers	28,800		26,700	26,700					32,400	
Atmospheric Scientists	31,300		27,300	27,300					35,400	
ENGINEERS	33,100	35,000	30,000	30,000				36,200	35,200	
LIFE SCIENTISTS	28,100	33,300	26,400	26,500	24,600		28,900	28,200	32,000	22,900
Biological Scientists	26,500	32,700	25,200	25,200	25,200		29,200	27,900	30,900	23,600
Agricultural Scientists	29,000	30,500	27,500	27,600					32,700	22,800
Medical Scientists	30,900	37,600	29,900	30,000			28,400	32,300	35,300	23,000
PSYCHOLOGISTS	26,700	38,100	25,600	25,300	28,500	28,000	25,300	25,000	34,800	25,800
SOCIAL SCIENTISTS	26,200	32,400	25,400	25,400	26,300			29,000	34,600	22,100
Economists	31,000	37,200	28,300	28,300				35,100	37,900	
Sociologists/Anthropologists	23,900		23,900	23,900				21,600		
Other Social Scientists	25,300	30,400	24,900	24,800	26,000			27,100	32,700	21,600

NOTE: Median salaries computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323.

Table 31

NUMBER AND MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED IN BUSINESS AND INDUSTRY BY FIELD, 1975-79

FIELD	1975				1977				1979			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
TOTAL	64,627	100.0	25.2	$26,000	71,475	100.0	25.1	$29,900	82,824	100.0	26.4	$33,800
Physical Scientists	22,117	34.2	40.5	25,900	22,980	32.2	40.0	29,900	25,003	30.2	41.6	33,100
Chemists	18,085	28.0	50.5	25,900	18,664	26.1	50.0	30,000	20,524	24.8	51.9	32,900
Physicists/Astronomers	4,032	6.2	21.4	25,900	4,316	6.0	21.4	29,700	4,479	5.4	21.7	34,000
Mathematical Scientists	1,053	1.6	7.7	25,600	1,282	1.8	8.8	27,400	1,445	1.7	9.4	30,800
Mathematicians	836	1.3	7.0	26,100	996	1.4	7.7	27,300	1,175	1.4	9.1	30,900
Statisticians	217	0.3	12.5	24,500	286	0.4	16.7	27,600	270	0.3	11.4	*
Computer Specialists	1,414	2.2	40.4	24,100	3,058	4.3	53.0	26,700	3,671	4.4	54.5	29,600
Environmental Scientists	2,918	4.5	24.1	26,200	3,103	4.3	23.8	28,600	4,246	5.1	29.1	34,000
Earth Scientists	2,671	4.1	28.0	26,500	2,700	3.8	27.6	28,600	3,777	4.6	33.9	34,100
Oceanographers	76	0.1	6.0	*	135	0.2	8.6	*	222	0.3	13.4	*
Atmospheric Scientists	171	0.3	13.0	22,600	268	0.4	15.8	29,200	247	0.3	13.7	*
Engineers	22,118	34.2	52.2	26,100	22,870	32.0	50.8	30,000	26,438	31.9	52.6	35,000
Life Scientists	8,834	13.7	13.6	25,500	10,075	14.1	14.0	28,700	11,464	13.8	14.3	33,300
Biological Scientists	3,498	5.4	9.0	24,800	4,011	5.6	9.5	27,400	4,344	5.2	9.5	32,700
Agricultural Scientists	2,517	3.9	19.5	23,200	2,858	4.0	20.0	26,800	3,384	4.1	22.5	30,500
Medical Scientists	2,819	4.4	21.4	29,700	3,206	4.5	20.7	33,200	3,736	4.5	19.4	37,600
Psychologists	4,124	6.4	13.7	30,500	5,525	7.7	16.4	33,300	7,076	8.5	18.6	38,100
Social Scientists	2,049	3.2	5.9	28,300	2,582	3.6	6.0	30,200	3,481	4.2	7.2	32,400
Economists	1,234	1.9	12.5	30,800	1,385	1.9	12.8	34,100	1,568	1.9	13.4	37,200
Sociologists/Anthropologists	94	0.1	1.2	*	193	0.3	2.0	*	287	0.3	2.8	*
Other Social Scientists	721	1.1	4.3	23,300	1,004	1.4	4.5	26,800	1,626	2.0	6.1	30,400

*No median computed for groups with fewer than 20 individuals reporting salary.

NOTES: Percents may not add to 100 because of rounding. Median salaries computed for full-time civilians only.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323

Table 32

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY, 1979

FIELD	Total	Research & Development				Management or Admin.			Teaching	Consulting	Sales Prof. Serv.	Other	No Report
		Total	Basic Res.	Applied Res.	Development	Total	of R&D	Other than R&D					
ALL FIELDS	$29,100	$29,200	$27,700	$30,000	$30,800	$35,000	$35,900	$32,400	$25,200	$31,300	$29,000	$30,100	$29,900
PHYSICAL SCIENTISTS	30,300	30,000	29,100	30,400	30,900	35,600	35,700	35,200	24,900	35,100	33,500	32,700	
Chemists	30,400	29,900	29,400	29,700	31,300	35,500	35,600	35,200	24,300		33,800	33,400	
Physicists/Astronomers	30,100	30,100	28,700	31,500	28,700	35,900	36,300	35,200	25,900			31,000	
MATHEMATICAL SCIENTISTS	26,300	29,000	25,900	30,300	30,600	33,200	36,600	31,700	24,600	33,300		20,600	
Mathematicians	26,100	28,700	26,500	30,800	30,500	31,500	35,900	30,100	24,500			21,000	
Statisticians	29,300	29,600				37,900			25,700				
COMPUTER SPECIALISTS	28,500	28,400	28,100	30,400	28,300	33,100	34,300	30,700	24,000			17,800	
ENVIRONMENTAL SCIENTISTS	30,300	30,100	28,600	30,300	30,600	34,500	35,900	31,200	26,100	31,100		34,200	
Earth Scientists	30,300	30,500	30,300	30,600		33,900	35,900	31,300	25,900	29,800		34,500	
Oceanographers	28,800	26,800	24,900	30,300		32,100	35,600		24,500				
Atmospheric Scientists	31,300	29,300	30,000	28,800		37,700			28,100				
ENGINEERS	33,100	31,100	30,000	31,000	32,000	38,300	38,300	37,000	29,500	32,500	36,500	33,100	
LIFE SCIENTISTS	28,100	27,500	27,100	27,900	29,700	33,100	34,300	31,200	24,900	28,500	35,200	26,200	36,400
Biological Scientists	26,500	26,700	26,500	27,400	28,600	32,700	34,200	30,600	24,300	26,600	35,500	25,000	22,800
Agricultural Scientists	29,000	27,700	29,800	27,400		32,300	33,500	30,400	27,200	27,500	29,800	27,100	
Medical Scientists	30,900	29,600	28,700	30,200	34,300	35,500	35,800	35,100	28,200	37,800	36,200	28,000	44,800
PSYCHOLOGISTS	26,700	25,900	24,100	27,400		30,600	34,500	29,500	24,500	30,600	26,700	30,000	
SOCIAL SCIENTISTS	26,200	27,900	25,200	29,500		32,400	33,400	31,900	24,500	30,600	22,600	29,100	31,400
Economists	31,000	32,100	26,600	33,300		40,200	39,200	40,500	26,900			39,500	
Sociologists/Anthropologists	23,900	23,900	25,600	21,600		29,100	30,400	25,900	23,000			27,500	
Other Social Scientists	25,300	25,600	22,800	27,400		31,400	30,800	31,600	24,000		22,400	23,900	30,000

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323.

Table 33

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND GEOGRAPHIC AREA, 1979

FIELD	Total	GEOGRAPHIC AREA								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
ALL FIELDS	$29,100	$27,700	$30,500	$28,500	$27,300	$30,400	$26,600	$28,200	$28,800	$29,500
PHYSICAL SCIENTISTS	30,300	30,100	31,300	29,800	26,500	31,800	28,100	27,700	30,300	30,900
Chemists	30,400	30,200	31,800	30,400	25,500	31,400	29,100	27,800	29,100	31,300
Physicists/Astronomers	30,100	29,400	30,400	28,400	29,100	32,200	27,500	27,600	31,300	30,600
MATH. SCIENTISTS	26,300	26,000	29,700	25,300	23,500	27,900	24,600	24,500	26,800	27,800
Mathematicians	26,100	25,800	29,500	24,800	22,500	27,300	22,800	24,300	28,000	27,900
Statisticians	29,300		33,400	30,500		29,500				25,300
COMPUTER SPECIALISTS	28,500	27,000	30,400	25,600	28,000	27,800		26,500	29,400	30,700
ENVIRON. SCIENTISTS	30,300	28,600	30,100	27,900	29,700	31,800	30,100	30,600	30,900	30,300
Earth Scientists	30,300	27,800	30,800	28,100	29,400	31,400	30,100	30,400	31,600	30,400
Oceanographers	28,800	26,200				30,800				27,200
Atmospheric Scientists	31,300					35,200				33,000
ENGINEERS	33,100	30,900	35,400	31,000	32,900	34,200	30,200	33,200	32,800	33,700
LIFE SCIENTISTS	28,100	24,800	29,100	29,400	27,500	29,700	25,700	26,900	26,800	27,500
Biological Scientists	26,500	24,100	27,300	27,900	26,600	28,400	25,300	24,700	24,900	26,400
Agricultural Scientists	29,000	26,600	28,500	30,100	27,800	30,600	27,400	28,700	28,200	29,000
Medical Scientists	30,900	28,600	33,500	32,000	30,800	31,600	27,700	29,700	27,800	29,000
PSYCHOLOGISTS	26,700	25,800	27,500	25,700	25,800	28,100	24,900	28,200	26,100	27,400
SOCIAL SCIENTISTS	26,200	24,900	25,900	26,000	24,100	30,400	25,800	23,000	25,500	25,700
Economists	31,000	27,700	30,000	30,300	31,800	37,800		27,500		33,200
Sociologists/ Anthropologists	23,900	25,200	23,800	23,300	21,900	24,500	23,300	23,000	25,600	23,800
Other Social Scientists	25,300	24,100	25,500	25,400	23,900	27,800	25,100	22,200	24,600	25,100

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323

Table 34

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE, 1979

FIELD	Total	YEARS OF PROFESSIONAL EXPERIENCE										
		1 or less	2-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 or more	No report
ALL FIELDS	$29,100	$19,600	$20,900	$24,500	$28,800	$31,100	$33,200	$36,100	$37,100	$38,800	$38,400	$29,200
PHYSICAL SCIENTISTS	30,300	22,200	23,400	25,600	30,000	32,000	34,700	37,300	39,200	38,400	36,800	36,000
Chemists	30,400	21,800	23,900	25,600	30,000	32,600	35,000	36,900	38,900	38,900	36,800	36,400
Physicists/Astronomers	30,100		20,700	25,800	30,000	30,700	34,300	39,000	40,000	36,600		
MATHEMATICAL SCIENTISTS	26,300		19,100	21,900	25,900	27,700	31,200	34,700	38,500	35,600	40,700	
Mathematicians	26,100		18,900	21,500	25,600	27,900	31,300	34,000	38,000	34,600	41,600	
Statisticians	29,300			23,400	30,100	25,300						
COMPUTER SPECIALISTS	28,500		20,500	26,300	30,600	32,000	35,300	33,200				
ENVIRONMENTAL SCIENTISTS	30,300		21,400	26,500	30,400	31,900	36,000	37,000	40,800	45,700	42,100	
Earth Scientists	30,300		23,800	26,900	30,500	30,600	34,600	35,800	42,000	45,500	40,600	
Oceanographers	28,800			25,100	30,200	36,300						
Atmospheric Scientists	31,300		18,800	27,200	30,400							
ENGINEERS	33,100		25,500	28,300	32,900	35,500	37,400	38,600	41,400	41,300	40,400	34,500
LIFE SCIENTISTS	28,100	19,400	20,300	23,600	27,700	30,600	32,200	35,200	36,400	37,200	40,600	29,100
Biological Scientists	26,500	18,800	19,500	22,800	26,200	30,200	31,000	34,400	33,900	36,600	39,300	26,600
Agricultural Scientists	29,000		20,900	23,800	28,200	29,800	31,800	33,600	36,200	35,100		
Medical Scientists	30,900	16,300	22,800	26,000	30,500	35,000	36,500	40,500	45,000	42,500	45,700	32,700
PSYCHOLOGISTS	26,700		19,600	22,700	26,800	29,800	32,200	34,400	34,500	35,900	33,500	26,000
SOCIAL SCIENTISTS	26,200	17,500	18,900	21,900	26,200	29,400	29,200	34,200	35,400	38,200	37,500	25,100
Economists	31,000		21,100	25,600	32,300	36,700	31,100	38,700	36,400	33,500		
Sociologists/Anthropologists	23,900		19,300	20,300	23,500	26,800	28,500	33,200	33,600	39,300		
Other Social Scientists	25,300		18,100	21,700	25,600	27,800	28,200	33,800	35,500	38,100	36,100	

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323

Table 35

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND AGE, 1979

FIELD	AGE										
	Total	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 & Over
ALL FIELDS	$29,100	$21,300	$22,800	$26,600	$30,200	$32,000	$34,100	$36,100	$36,000	$36,600	$31,900
PHYSICAL SCIENTISTS	30,300	23,500	24,400	28,200	30,600	34,000	36,000	36,900	39,300	35,800	
Chemists	30,400	23,200	24,500	28,500	30,700	34,500	36,000	36,800	39,000	37,100	
Physicists/Astronomers	30,100	24,500	24,000	27,700	30,400	33,400	36,100	36,900	40,200	34,000	
MATHEMATICAL SCIENTISTS	26,300	18,500	20,600	25,000	27,000	30,600	32,500	36,300	36,100	36,800	
Mathematicians	26,100	18,100	20,500	24,500	26,800	30,400	32,500	35,600	35,100	40,900	
Statisticians	29,300		21,100	29,700	29,000	30,900					
COMPUTER SPECIALISTS	28,500	20,600	24,300	28,500	32,800	34,800	42,100				
ENVIRONMENTAL SCIENTISTS	30,300		24,500	28,200	31,000	33,600	35,800	36,500	42,300	41,500	
Earth Scientists	30,300		24,800	28,000	30,800	31,200	35,600	36,500	42,700	39,800	
Oceanographers	28,800		24,000	27,900	32,700	36,500					
Atmospheric Scientists	31,300		22,800	30,400	32,600						
ENGINEERS	33,100	24,700	26,800	31,300	34,400	35,000	39,000	40,300	39,300	44,200	
LIFE SCIENTISTS	28,100	20,200	21,700	25,000	29,000	30,900	33,100	35,100	34,900	35,700	
Biological Scientists	26,500	19,400	20,600	24,100	27,800	30,700	32,400	32,600	33,700	35,500	
Agricultural Scientists	29,000		23,100	25,000	29,300	30,000	32,600	36,000	32,000		
Medical Scientists	30,900	21,000	24,100	27,900	32,400	34,100	37,500	41,700	42,600	42,900	
PSYCHOLOGISTS	26,700	18,600	21,400	25,000	28,700	30,300	32,300	34,200	33,900	32,300	
SOCIAL SCIENTISTS	26,200	20,200	20,400	24,100	26,600	28,100	31,000	33,000	33,800	37,300	
Economists	31,000		22,600	30,200	32,700	33,800	33,500	35,300	37,900		
Sociologists/Anthropologists	23,900		19,300	22,000	24,900	23,900	27,500	31,800	33,800	38,200	
Other Social Scientists	25,300		19,900	23,000	26,100	26,700	30,700	32,800	32,100	35,700	

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323.

Table 36

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1979

FIELD	TOTAL	SEX		RACE				
		Men	Women	White	Black	Am. Indian	Asian	No Report
ALL FIELDS	$29,100	$29,900	$23,100	$29,200	$26,600	$25,800	$28,200	$29,800
PHYSICAL SCIENTISTS	30,300	30,500	24,400	30,400	28,000		27,800	30,600
Chemists	30,400	30,700	24,200	30,600	25,500		28,200	29,300
Physicists/Astronomers	30,100	30,200	25,400	30,100			27,500	32,100
MATHEMATICAL SCIENTISTS	26,300	26,700	21,700	26,400	25,100		25,700	28,300
Mathematicians	26,100	26,400	21,800	26,000	22,900		28,400	26,900
Statisticians	29,300	29,600	21,600	29,600				
COMPUTER SPECIALISTS	28,500	28,800	22,800	28,400			29,800	
ENVIRONMENTAL SCIENTISTS	30,300	30,400	23,500	30,300			25,800	34,700
Earth Scientists	30,300	30,400	25,300	30,300			27,900	36,500
Oceanographers	28,800	30,100	21,500	28,800				
Atmospheric Scientists	31,300	31,800		31,600				
ENGINEERS	33,100	33,200	26,600	33,900			30,300	32,500
LIFE SCIENTISTS	28,100	28,900	23,000	28,400	25,000	25,500	26,000	28,300
Biological Scientists	26,500	27,500	22,200	26,700	25,600		24,800	27,100
Agricultural Scientists	29,000	29,100	21,600	29,200			26,000	31,700
Medical Scientists	30,900	32,700	25,300	31,200	26,500		28,900	30,700
PSYCHOLOGISTS	26,700	28,000	23,200	26,600	24,800	30,100	25,400	30,100
SOCIAL SCIENTISTS	26,200	26,800	22,600	26,100	28,000		25,200	28,600
Economists	31,000	31,500	26,900	30,900			35,300	
Sociologists/Anthropologists	23,900	25,000	22,100	23,800	23,900		24,300	29,100
Other Social Scientists	25,300	25,700	22,300	25,300	28,900		23,400	25,700

NOTE: All median salaries were computed only for full-time employed civilians.
No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: Division of Science Resources Studies, National Science Foundation, Unpublished Data, May 1981.

Table 37

MEDIAN SALARIES OF 1978 S/E GRADUATES* IN 1980

FIELD OF DEGREE	LEVEL OF DEGREE AND SEX			
	Bachelor's Degree		Master's Degree	
	Male	Female	Male	Female
All Science and Engineering	$16,900	$12,500	$21,900	$14,300
Physical Science	14,400	13,100	19,300	17,900
Mathematics/Statistics	17,000	12,100	20,300	14,100
Computer Specialties	19,000	19,100	26,500	22,300
Engineering	21,300	20,700	25,000	23,000
Life Sciences	12,000	11,400	13,800	13,900
Psychology	9,500	9,900	15,400	12,500
Social Sciences	12,100	9,500	16,500	13,700

* Excludes S/E graduates who are enrolled full-time in graduate school.

SOURCE: National Science Foundation, Employment Attributes of Recent Science and Engineering Graduates, NSF 80-325, October 1980.

Table 38

1979 MEDIAN ANNUAL SALARIES OF 1977 SCIENCE/ENGINEERING BACCALAUREATE GRADUATES* BY FIELD OF DEGREE AND S/E EMPLOYMENT STATUS

FIELD OF DEGREE	TOTAL EMPLOYED			SCIENCE/ENGINEERING EMPLOYED			NON-SCIENCE/ENGINEERING EMPLOYED		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Total	$14,100	$15,300	$11,500	$16,300	$17,100	$13,200	$12,100	$13,100	$10,500
Physical Sciences	14,200	14,300	13,600	14,700	14,700	14,500	12,100	12,200	10,200
Chemistry	14,100	14,200	13,700	14,500	14,500	14,500	11,600	12,100	
Physics/Astronomy	15,100	15,100		15,500	15,400				
Environmental Sciences	13,600	14,100	12,100	14,500	14,600		12,200	12,900	10,200
Other Physical Sciences									
Mathematical Sciences	16,000	16,300	15,100	17,100	17,200	16,500	11,300	12,100	10,700
Mathematics	14,600	15,000	14,400	16,400	16,800	16,200	11,100	11,600	10,700
Computer Sciences	18,100	18,600		18,600	18,900				
Engineering	18,900	18,900	19,200	18,900	18,900	19,300	18,900	18,900	
Life Sciences	12,000	12,200	11,200	12,000	12,100	11,100	12,100	12,500	11,600
Biology	11,600	12,100	11,400	11,200	11,400	11,100	12,100	12,200	11,700
Agricultural Sciences	12,200	12,800	10,200	12,400	12,900	10,600	12,200	12,600	9,100
Social Sciences	12,000	13,000	10,500	12,000	11,300	12,100	12,000	13,300	10,300
Psychology	11,600	12,200	11,100	10,400	10,100	11,100	12,000	13,200	11,000
Economics	15,000	15,300					14,800	15,100	
Sociology/ Anthropology	11,000	12,000	10,100	11,200			10,800	12,100	10,100
Other Social Sciences	12,900	13,000	11,200				13,000	13,400	9,400

*Excludes individuals enrolled full time in graduate school.

NOTE: Median annual salaries computed only for full time employed civilians; no median computed for groups with less than 20 respondents.

SOURCE: National Science Foundation, Employment Attributes of Recent Science and Engineering Graduates, NSF 80-325, October 1980.

Table 39

1979 MEDIAN ANNUAL SALARIES OF 1977 SCIENCE/ENGINEERING MASTERS' DEGREE GRADUATES* BY FIELD OF STUDY AND S/E EMPLOYMENT STATUS

FIELD OF STUDY	TOTAL EMPLOYED			SCIENCE/ENGINEERING EMPLOYED			NON-SCIENCE/ENGINEERING EMPLOYED		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Total	$18,900	$19,500	$14,900	$19,400	$20,100	$15,300	$15,000	$16,100	$14,200
Physical Sciences	19,000	19,300	16,200	19,300	19,500	16,800	16,100	16,900	
Chemistry	18,900	19,500		19,100	19,600				
Physics/Astronomy	19,100	19,400		19,200	19,200				
Environmental Sciences	19,100	19,300	16,400	19,900	20,300				
Other Physical Sciences									
Mathematical Sciences	19,300	20,200	16,900	20,300	20,400	17,400	16,000	16,100	
Mathematics	16,900	18,100	16,200	18,600	19,200		14,300	14,800	
Computer Sciences	24,200	24,200		24,100	24,100				
Engineering	22,300	22,300	20,300	22,200	22,200	19,800			
Life Sciences	14,800	14,900	13,300	15,200	15,500	13,300	13,300	13,300	
Biology	14,800	15,000	13,400	15,500	16,200	13,600	12,200	12,200	
Agricultural Sciences	14,800	14,800		14,900	15,000		14,400	14,400	
Social Sciences	16,000	17,200	13,600	16,200	17,000	13,000	15,100	16,500	14,300
Psychology	14,400	15,200	13,500	14,100	15,000	12,600	14,900	16,200	14,400
Economics	18,800	18,900		19,100	19,100				
Sociology/ Anthropology	16,000	18,000					13,600		
Other Social Sciences	17,300	17,500					17,400		

*Excludes individuals enrolled full time in graduate school.

NOTE: Median salaries computed only for full time employed civilians; no median computed for groups with less than 20 respondents.

SOURCE: Battelle Columbus Laboratories. 1980 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1980.

Table 40

NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1980

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL*
Aeronautical and Astronautical Engineering	(118) $1,753	(58) $1,886	(62) $2,035	(49) $2,220	(60) $2,417	(60) $2,560	(180) $2,751	(137) $2,827	(179) $2,931	(2,669) $2,432
Chemical Engineering	(101) 1,815	(86) 1,940	(52) 2,063	(32) 2,291	(24) 2,517	(18) 2,572	(51) 2,592	(39) 2,744	(77) 2,838	(1,347) 2,270
Electrical and Electronic Engineering	(1,270) 1,869	(832) 2,020	(620) 2,190	(362) 2,322	(372) 2,518	(332) 2,627	(870) 2,793	(583) 2,899	(767) 2,899	(17,072) 2,367
Industrial Engineering	(12) 1,642	(12) 1,850	(4) 1,850	(9) 2,111	(7) 2,357	(3) 2,367	(13) 2,546	(7) 2,557	(13) 2,492	(232) 2,184
Materials Engineering	(26) 1,742	(18) 1,794	(34) 2,126	(13) 2,077	(13) 2,662	(12) 2,417	(16) 2,613	(20) 2,485	(29) 2,555	(558) 2,295
Mechanical Engineering	(215) 1,936	(134) 2,089	(112) 2,231	(72) 2,335	(87) 2,631	(56) 2,736	(165) 2,741	(110) 2,849	(194) 2,851	(3,298) 2,421
Metallurgical Engineering	(12) 1,825	(4) 1,875	(10) 1,990	(7) 2,029	(3) 2,267	(3) 2,300	(12) 2,692	(9) 2,822	(15) 2,567	(258) 2,295
Mining and Petroleum Engineering	(9) 2,011	(5) 1,760	(10) 2,400	(2) 2,650	(6) 3,267	(3) 2,767	(4) 2,850	(3) 3,333	(7) 3,400	(155) 2,629
Nuclear and Reactor Engineering	(39) 1,767	(32) 1,850	(31) 2,139	(15) 2,393	(19) 2,684	(11) 2,682	(36) 2,858	(25) 2,916	(36) 3,097	(633) 2,404
Total Engineering	(1,846) 1,858	(1,232) 1,995	(965) 2,169	(588) 2,299	(613) 2,531	(524) 2,610	(1,405) 2,766	(958) 2,860	(1,370) 2,884	(27,110) 2,374
Agricultural and Biological Sciences	(59) 1,192	(71) 1,323	(54) 1,522	(28) 1,707	(24) 1,729	(13) 2,069	(30) 2,027	(21) 2,167	(20) 2,345	(886) 1,591
Atmospheric, Earth, Marine & Space Sciences	(15) 1,500	(11) 1,427	(6) 1,767	(9) 1,922	(3) 1,600	(1) 1,600	(1) 2,600	(4) 2,300	(6) 2,283	(158) 1,822
Chemistry	(151) 1,411	(89) 1,533	(83) 1,825	(53) 1,942	(58) 2,071	(54) 2,187	(68) 2,435	(83) 2,472	(132) 2,563	(2,248) 1,991
Computer Sciences	(237) 1,713	(150) 1,856	(108) 2,052	(90) 2,152	(60) 2,432	(52) 2,479	(81) 2,506	(60) 2,568	(28) 2,868	(2,467) 2,044
Mathematics & Statistics	(37) 1,581	(27) 1,678	(36) 1,989	(16) 2,144	(39) 2,323	(23) 2,348	(25) 2,564	(20) 2,715	(12) 2,992	(610) 2,220
Physics	(32) 1,619	(32) 1,856	(29) 1,962	(23) 2,248	(26) 2,415	(27) 2,541	(65) 2,751	(38) 2,889	(60) 2,903	(871) 2,470
Economics	(15) 1,480	(8) 1,625	(8) 1,675	(4) 2,250	(1) 2,100		(5) 2,320	(3) 2,333	(5) 3,300	(133) 1,946

* Total includes all years since first degree.

SOURCE: Battelle Columbus Laboratories, 1980 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1980.

Table 41

NUMBER AND MEAN MONTHLY SALARIES OF MASTER'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1980

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL*
Aeronautical and Astronautical Engineering	(22) $1,918	(26) $1,935	(23) $2,187	(34) $2,409	(41) $2,502	(43) $2,735	(90) $2,777	(79) $3,037	(93) $2,985	(1,262) $2,700
Chemical Engineering	(29) 1,952	(55) 2,004	(44) 2,220	(29) 2,410	(30) 2,617	(13) 2,531	(23) 2,930	(19) 2,963	(35) 3,111	(748) 2,464
Electrical and Electronic Engineering	(128) 1,967	(226) 2,093	(318) 2,263	(282) 2,437	(334) 2,679	(276) 2,791	(501) 2,986	(325) 3,056	(406) 3,097	(7,903) 2,690
Industrial Engineering	(2) 1,800	(4) 1,725	(8) 2,075	(4) 2,225	(1) 2,500	(6) 2,700	(5) 2,560	(6) 2,650	(4) 2,750	(125) 2,443
Materials Engineering	(5) 1,700	(6) 1,833	(14) 2,064	(8) 2,325	(10) 2,530	(5) 2,340	(12) 2,925	(17) 2,753	(16) 2,994	(253) 2,494
Mechanical Engineering	(28) 1,982	(68) 2,084	(68) 2,247	(60) 2,392	(54) 2,630	(45) 2,671	(61) 2,880	(48) 2,921	(40) 3,038	(1,382) 2,586
Metallurgical Engineering	(6) 2,067	(12) 1,975	(13) 2,146	(5) 2,480	(1) 2,600	(6) 2,750	(10) 2,920	(6) 3,000	(10) 3,050	(179) 2,480
Mining and Petroleum Engineering		(6) 2,083	(9) 2,078	(3) 2,300	(2) 2,500	(1) 2,500	(3) 2,900	(3) 3,533	(8) 4,488	(124) 2,935
Nuelcar Engineering	(15) 1,873	(18) 1,900	(39) 2,249	(34) 2,500	(26) 2,692	(15) 2,700	(20) 2,930	(23) 2,974	(16) 3,044	(527) 2,590
Total Engineering	(246) 1,951	(455) 2,038	(560) 2,228	(484) 2,408	(523) 2,642	(442) 2,735	(957) 2,939	(549) 3,018	(652) 3,085	(13,138) 2,646
Agricultural and Biological Sciences	(3) 1,467	(36) 1,439	(52) 1,617	(47) 1,766	(30) 1,973	(24) 1,917	(33) 2,127	(27) 2,541	(44) 2,498	(854) 1,948
Atmospheric, Earth, Marine & Space Sciences	(5) 1,600	(4) 1,775	(13) 1,792	(10) 2,100	(6) 2,100	(5) 2,420	(2) 2,550	(5) 2,520	(2) 3,100	(164) 2,040
Chemistry	(10) 1,480	(23) 1,700	(37) 1,803	(35) 2,029	(26) 2,258	(31) 2,197	(35) 2,529	(36) 2,519	(71) 2,742	(915) 2,267
Economics	(4) 1,575	(11) 1,773	(14) 1,871	(16) 2,081	(10) 2,280	(7) 2,514	(4) 2,775	(6) 2,950	(4) 2,775	(210) 2,190
Computer Sciences	(19) 1,768	(35) 1,897	(71) 2,034	(58) 2,329	(54) 2,496	(40) 2,483	(45) 2,549	(33) 2,827	(23) 2,817	(1,103) 2,356
Mathematics and Statistics	(7) 1,614	(14) 1,764	(10) 1,960	(19) 2,289	(28) 2,489	(17) 2,800	(35) 2,780	(12) 2,917	(19) 3,163	(461) 2,504
Physics	(11) 1,873	(13) 1,862	(17) 2,071	(20) 2,160	(33) 2,524	(24) 2,792	(54) 2,844	(35) 2,934	(45) 3,111	(690) 2,645

* Total includes all years since first degree.

SOURCE: Battelle Columbus Laboratories, 1980 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1980.

Table 42

NUMBER AND MEAN MONTHLY SALARIES OF DOCTORATE DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1980

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	5	7	10	13	15	18-19	22-23	26-27	30-31	TOTAL*
Aeronautical and Astronautical Engineering	(2) $2,250	(5) $2,680	(10) $2,440	(21) $2,729	(25) $2,856	(33) $3,052	(22) $3,164	(12) $3,483	(18) $3,433	(384) $2,962
Chemical Engineering	(11) 2,309	(18) 2,411	(32) 2,591	(23) 2,848	(23) 2,878	(45) 3,102	(29) 3,307	(17) 3,341	(16) 3,300	(530) 2,925
Electrical and Electronic Engineering	(15) 2,407	(48) 2,535	(89) 2,621	(98) 2,879	(118) 2,999	(164) 3,134	(104) 3,374	(63) 3,373	(69) 3,380	(1,856) 3,029
Materials Engineering	(3) 2,367	(9) 2,356	(8) 2,325	(6) 2,717	(11) 2,655	(17) 3,041	(18) 3,161	(5) 3,580	(11) 3,355	(212) 2,916
Mechanical Engineering	(2) 2,250	(12) 2,542	(30) 2,497	(35) 2,617	(35) 2,834	(57) 3,065	(28) 3,071	(24) 3,142	(6) 3,550	(522) 2,864
Metallurgical Engineering	(1) 2,300	(8) 2,400	(13) 2,469	(8) 2,725	(5) 2,800	(14) 2,950	(12) 2,967	(12) 3,367	(4) 3,125	(190) 2,812
Mining and Petroleum Engineering	(2) 2,250	(3) 2,867	(6) 2,717	(9) 2,878	(8) 2,938	(10) 3,730	(5) 3,860	(9) 3,956	(8) 4,650	(160) 3,613
Nuclear Engineering	(5) 2,160	(7) 2,343	(10) 2,470	(17) 2,700	(16) 2,706	(28) 3,075	(12) 3,167	(11) 3,209	(10) 3,210	(277) 2,873
Total Engineering	(43) 2,321	(121) 2,486	(213) 2,560	(237) 2,781	(256) 2,890	(413) 3,101	(245) 3,263	(168) 3,367	(156) 3,403	(4,543) 2,970
Agricultural & Biological Sciences	(11) 1,664	(33) 1,855	(53) 1,949	(60) 2,302	(44) 2,489	(94) 2,649	(79) 2,843	(62) 2,982	(77) 2,977	(1,295) 2,524
Atmospheric Earth, Marine & Space Sciences	(2) 1,700	(6) 1,883	(14) 1,964	(12) 2,333	(7) 2,757	(14) 2,621	(15) 2,927	(4) 2,700	(7) 3,186	(184) 2,559
Computer Sciences	(3) 2,400	(11) 2,282	(16) 2,469	(20) 2,640	(17) 2,565	(23) 3,052	(13) 2,962	(8) 2,813	(9) 3,078	(310) 2,700
Mathematics & Statistics	(4) 2,100	(15) 2,100	(19) 2,379	(17) 2,476	(30) 2,733	(36) 2,814	(21) 3,067	(16) 3,113	(17) 3,288	(453) 2,779
Chemistry	(34) 2,024	(59) 2,042	(88) 2,1[illegible]	(76) 2,350	(84) 2,498	(119) 2,836	(103) 2,967	(84) 3,158	(95) 3,225	(1,828) 2,705
Physics	(9) 2,111	(24) 1,988	(49) 2,208	(62) 2,518	(62) 2,692	(125) 2,914	(86) 3,181	(71) 3,277	(60) 3,370	(1,400) 2,832
Economics	(3) 1,900	(6) 2,200	(14) 2,307	(15) 2,647	(14) 2,707	(18) 2,867	(14) 3,100	(8) 2,963	(7) 3,286	(249) 2,777
Psychology	(1) 1,700	(5) 2,020	(10) 2,310	(19) 2,379	(14) 2,400	(10) 2,560	(13) 2,754	(6) 3,017	(9) 3,256	(224) 2,478

* Total includes all years since first degree.

SOURCE: Battelle Columbus Laboratories, 1980 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1980.

Table 43

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY DEGREE LEVEL, TYPE OF ESTABLISHMENT, AND SELECTED YEARS SINCE FIRST DEGREE, 1980

TYPE OF ESTABLISHMENT AND DEGREE LEVEL	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL*
BACHELOR'S DEGREE										
Nonprofit Research Institutes	(188) $1,403	(131) $1,492	(84) $1,674	(58) $1,852	(38) $2,024	(38) $2,161	(70) $2,330	(42) $2,336	(57) $2,544	(2,079) $1,778
Educational Institutions	(32) 1,391	(30) 1,527	(33) 1,645	(21) 1,771	(15) 2,033	(11) 1,982	(22) 2,341	(16) 2,113	(17) 2,453	(527) 1,814
Contract Research Centers	(238) 1,737	(133) 1,840	(130) 2,102	(88) 2,265	(88) 2,506	(86) 2,478	(243) 2,698	(192) 2,834	(258) 2,938	(4,110) 2,411
Federal Establishments	(52) 1,625	(68) 1,907	(102) 2,099	(94) 2,215	(99) 2,368	(85) 2,448	(208) 2,772	(124) 2,945	(180) 3,100	(2,785) 2,566
Total Industry	(2,066) 1,834	(1,372) 1,962	(1,029) 2,137	(629) 2,270	(671) 2,491	(541) 2,601	(1,330) 2,755	(952) 2,817	(1,340) 2,829	(28,307) 2,317
MASTER'S DEGREE										
Nonprofit Research Institutes	(25) 1,652	(54) 1,741	(85) 1,964	(54) 1,939	(51) 2,169	(31) 2,390	(48) 2,527	(48) 2,631	(46) 2,652	(1,264) 2,171
Educational Institutions	(6) 1,617	(38) 1,545	(52) 1,638	(46) 1,828	(38) 2,045	(24) 1,921	(30) 2,173	(30) 2,457	(34) 2,512	(910) 2,022
Contract Research Centers	(50) 1,864	(107) 1,943	(146) 2,125	(130) 2,337	(117) 2,598	(110) 2,712	(244) 2,876	(168) 2,980	(214) 3,016	(3,571) 2,609
Federal Establishments	(8) 1,675	(12) 1,792	(37) 2,089	(53) 2,226	(76) 2,412	(63) 2,483	(85) 2,868	(43) 2,858	(78) 3,055	(1,367) 2,554
Total Industry	(243) 1,932	(450) 2,025	(546) 2,186	(490) 2,384	(529) 2,636	(437) 2,710	(701) 2,903	(512) 3,001	(601) 3,058	(12,721) 2,611
DOCTORATE DEGREE										
Nonprofit Research Institutes		(1) 1,100	(33) 1,930	(62) 2,135	(63) 2,327	(56) 2,568	(63) 2,921	(46) 2,865	(38) 2,926	(1,074) 2,515
Educational Institutions		(4) 1,450	(51) 1,751	(86) 1,907	(87) 2,176	(91) 2,416	(146) 2,767	(117) 2,919	(114) 3,057	(2,187) 2,560
Contract Research Centers		(7) 2,214	(81) 2,356	(139) 2,409	(183) 2,627	(182) 2,775	(200) 3,025	(132) 3,180	(115) 3,269	(3,185) 2,835
Federal Establishments			(15) 1,927	(24) 2,104	(35) 2,391	(37) 2,535	(86) 2,930	(51) 3,061	(60) 3,322	(1,008) 2,807
Total Industry	(2) 2,300	(14) 2,207	(156) 2,449	(266) 2,535	(271) 2,793	(290) 2,887	(333) 3,240	(213) 3,354	(194) 3,413	(5,292) 2,982

* Total includes all years since first degree.

SOURCE: Battelle Columbus Laboratories, 1980 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1980.

Table 44

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY HIGHEST DEGREE FIELD AND SELECTED YEARS SINCE DEGREE, 1980

HIGHEST DEGREE FIELD	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL+
Engineering*	(1,773) $1,867	(1,101) $2,021	(831) $2,197	(515) $2,337	(552) $2,556	(474) $2,626	(1,306) $2,789	(888) $2,885	(1,282) $2,913	(24,789) $2,390
Chemistry*	(172) 1,445	(104) 1,563	(83) 1,795	(66) 1,986	(67) 2,130	(67) 2,275	(94) 2,415	(91) 2,459	(161) 2,566	(2,699) 2,069
Physics*	(73) 1,679	(65) 1,892	(81) 2,044	(51) 2,267	(67) 2,481	(52) 2,548	(149) 2,787	(76) 2,850	(109) 2,916	(2,003) 2,437
Other Physical Sciences*	(34) 1,624	(27) 1,659	(25) 2,096	(21) 2,067	(10) 2,180	(10) 2,320	(51) 2,614	(27) 2,719	(41) 2,861	(651) 2,275
Life Sciences*	(91) 1,249	(99) 1,378	(87) 1,631	(35) 1,706	(27) 1,748	(18) 2,022	(30) 2,123	(39) 2,315	(43) 2,407	(1,305) 1,675
Social Sciences*	(27) 1,448	(29) 1,676	(25) 1,760	(17) 1,853	(9) 2,233	(5) 2,140	(10) 2,430	(15) 2,600	(21) 2,567	(434) 1,931
Mathematics & Statistics*	(173) 1,668	(125) 1,770	(112) 2,021	(87) 2,152	(95) 2,381	(74) 2,484	(104) 2,538	(69) 2,680	(56) 2,814	(2,511) 2,159
Engineering**	(230) 1,944	(415) 2,053	(462) 2,261	(402) 2,429	(435) 2,680	(371) 2,746	(647) 2,967	(456) 3,052	(521) 3,120	(11,110) 2,656
Chemistry**	(8) 1,500	(21) 1,700	(43) 1,858	(37) 1,941	(33) 2,282	(35) 2,277	(37) 2,573	(38) 2,561	(89) 2,781	(1,046) 2,319
Physics**	(11) 1,818	(26) 1,881	(42) 1,995	(52) 2,265	(58) 2,476	(44) 2,791	(89) 2,796	(65) 2,908	(74) 3,043	(1,303) 2,611
Other Physical Sciences**	(17) 1,765	(20) 1,755	(42) 2,014	(32) 2,109	(49) 2,331	(32) 2,553	(46) 2,878	(29) 2,931	(35) 3,051	(861) 2,426
Life Sciences**	(5) 1,380	(42) 1,469	(68) 1,663	(57) 1,853	(35) 2,137	(33) 2,018	(40) 2,195	(36) 2,531	(53) 2,583	(1,054) 2,008
Social Sciences**	(7) 1,486	(14) 1,650	(32) 1,856	(21) 2,100	(17) 2,129	(17) 2,188	(11) 2,618	(8) 2,813	(18) 2,728	(419) 2,150
Mathematics & Statistics**	(16) 1,844	(41) 1,832	(49) 1,998	(47) 2,238	(46) 2,443	(40) 2,688	(73) 2,725	(46) 2,843	(44) 3,023	(1,172) 2,490
Engineering***	(1) 2,500	(14) 2,157	(103) 2,514	(175) 2,565	(187) 2,809	(223) 2,922	(274) 3,184	(164) 3,255	(105) 3,391	(3,667) 2,978
Chemistry***		(2) 2,150	(55) 2,076	(101) 2,218	(101) 2,465	(94) 2,552	(114) 2,974	(104) 3,118	(118) 3,242	(2,235) 2,785
Physics***		(2) 1,600	(39) 2,151	(82) 2,321	(109) 2,556	(106) 2,725	(170) 3,046	(97) 3,215	(92) 3,366	(2,154) 2,863
Other Physical Sciences***	(1) 2,100	(1) 1,300	(28) 2,139	(40) 2,200	(40) 2,563	(36) 2,708	(54) 2,996	(27) 3,400	(25) 3,432	(778) 2,784
Life Sciences***		(2) 1,100.	(42) 1,862	(67) 2,054	(70) 2,304	(51) 2,427	(80) 2,705	(67) 2,784	(92) 3,041	(1,510) 2,533
Social Sciences***		(1) 2,300	(16) 2,100	(34) 2,212	(42) 2,495	(33) 2,630	(32) 3,000	(21) 3,133	(22) 3,136	(611) 2,622
Mathematics & Statistics***		(1) 2,300	(16) 2,125	(18) 2,333	(28) 2,479	(40) 2,690	(25) 2,980	(27) 3,052	(24) 3,321	(586) 2,758

+ Total includes all years since first degree.

* Bachelor's Degree   ** Master's Degree   *** Doctorate Degree

SOURCE: Batelle Columbus Laboratories, 1980 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1980.

Table 45

NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S AND MASTER'S DEGREE NONSUPERVISORY PROFESSIONALS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1980

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL+
BIOLOGICAL AND BIOMEDICAL SCIENCES*										
Bachelor's Degree	(21) $1,229	(32) $1,372	(28) $1,600	(12) $1,883	(10) $2,080	(10) $2,170	(14) $2,243	(13) $2,362	(16) $2,431	(394) $1,777
Master's Degree		(11) 1,382	(17) 1,753	(15) 1,707	(7) 2,243	(5) 2,320	(14) 2,343	(9) 2,856	(21) 2,567	(290) 2,103
BIOLOGICAL AND BIOMEDICAL SCIENCES**										
Bachelor's Degree	(31) 1,129	(30) 1,243	(18) 1,433	(12) 1,483	(11) 1,355	(3) 1,733	(12) 1,675	(4) 1,550	(2) 1,700	(372) 1,333
Master's Degree	(1) 1,400	(13) 1,546	(14) 1,579	(9) 1,556	(13) 1,862	(7) 1,829	(8) 1,800	(5) 2,580	(4) 1,800	(191) 1,705
ENGINEERING*										
Bachelor's Degree	(1,623) 1,868	(1,129) 2,008	(905) 2,182	(568) 2,309	(595) 2,544	(503) 2,626	(1,388) 2,772	(942) 2,870	(1,359) 2,888	(25,618) 2,401
Master's Degree	(222) 1,953	(415) 2,047	(518) 2,238	(454) 2,419	(504) 2,655	(427) 2,750	(742) 2,948	(538) 3,030	(646) 3,089	(12,604) 2,665
ENGINEERING**										
Bachelor's Degree	(223) 1,783	(103) 1,846	(60) 1,982	(20) 2,000	(18) 2,100	(21) 2,229	(17) 2,224	(16) 2,250	(11) 2,382	(1,492) 1,901
Master's Degree	(24) 1,933	(40) 1,945	(42) 2,107	(30) 2,247	(19) 2,316	(15) 2,307	(15) 2,467	(11) 2,400	(6) 2,650	(534) 2,195
CHEMISTRY*										
Bachelor's Degree	(86) 1,434	(52) 1,575	(67) 1,861	(45) 2,022	(44) 2,170	(38) 2,329	(59) 2,514	(76) 2,539	(122) 2,596	(1,718) 2,106
CHEMISTRY**										
Bachelor's Degree	(65) 1,382	(37) 1,473	(16) 1,675	(8) 1,488	(14) 1,757	(16) 1,850	(9) 1,922	(7) 1,743	(10) 2,160	(530) 1,618
MATH & STATISTICS*										
Bachelor's Degree	(15) 1,687	(13) 1,800	(20) 2,025	(11) 2,200	(32) 2,369	(19) 2,400	(20) 2,665	(16) 2,913	(10) 3,140	(401) 2,381
MATH & STATISTICS**										
Bachelor's Degree	(22) 1,509	(14) 1,564	(16) 1,944	(5) 2,020	(7) 2,114	(4) 2,100	(5) 2,160	(4) 1,925	(2) 2,250	(209) 1,910

* Males only. ** Females only. + Total includes all years since first degree.

Table 46

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY PROFESSIONALS BY TYPE OF DEGREE AND SELECTED YEARS SINCE DEGREE, 1980

DEGREE	SELECTED YEARS SINCE DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL+
Doctor of Veterinary Medicine	(3) $ 1,800	(3) $ 2,200	(6) $ 2,333	(4) $ 2,650	(2) $ 2,450	(3) $ 2,967	(5) $ 3,540	(8) $ 3,250	(1) $ 3,700	(96) $ 2,880
Doctor of Dental Science		(1) 2,200		(2) 2,400	(2) 3,150	(2) 3,000	(3) 3,600	(5) 3,800	(4) 3,400	(70) 3,160
Medical Doctor	(2) 2,350	(10) 1,890	(11) 2,182	(4) 2,650	(11) 2,618	(10) 2,510	(12) 2,500	(5) 2,420	(7) 2,400	(207) 2,568

* Total includes all years since first degree.

SOURCE: Industrial Research & Development Magazine, March 1981.

Table 47

SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY PROFESSION, 1980 and 1981

PROFESSION	Median Salary		% Increase
	1981	1980	
Mathematician	$35,750	$33,099	8.0%
Aeronautical Engineer	33,950	32,226	5.3
Chemical Engineer	33,360	29,272	13.9
Physicist	33,180	31,050	6.8
Electrical Engineer	33,089	29,635	11.6
Metallurgist	33,064	30,228	9.4
Mechanical Engineer	32,221	29,480	9.3
Chemist	30,014	27,031	11.0
Biologist	29,200	25,561	14.2
Industrial Engineer	28,750	26,649	7.9
Other Professionals	28,729	26,118	9.9

Table 48

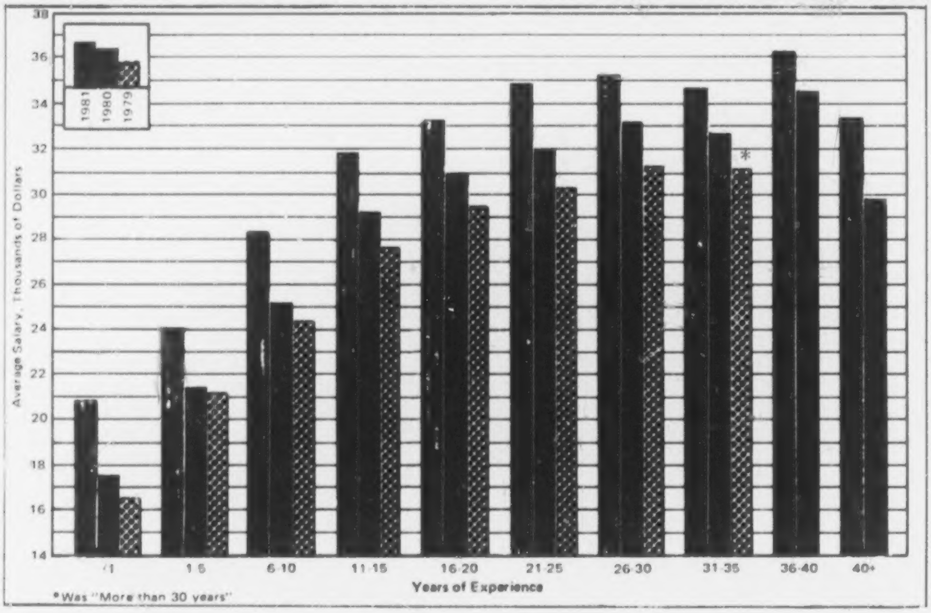
SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY DEGREE LEVEL, 1980 and 1981

DEGREE	MEDIAN SALARY		% Increase	Annual Difference*		Difference Increase %
	1981	1980		1981	1980	
Doctorate	$35,161	$32,252	9.0%	$4,043	$3,876	4.3%
Master's	31,118	28,376	9.7	2,105	2,067	1.8
Bachelor's	29,013	26,309	10.3	3,846	3,310	16.2
<Bachelor's	25,167	22,999	9.4			

* Difference above next lower degree.

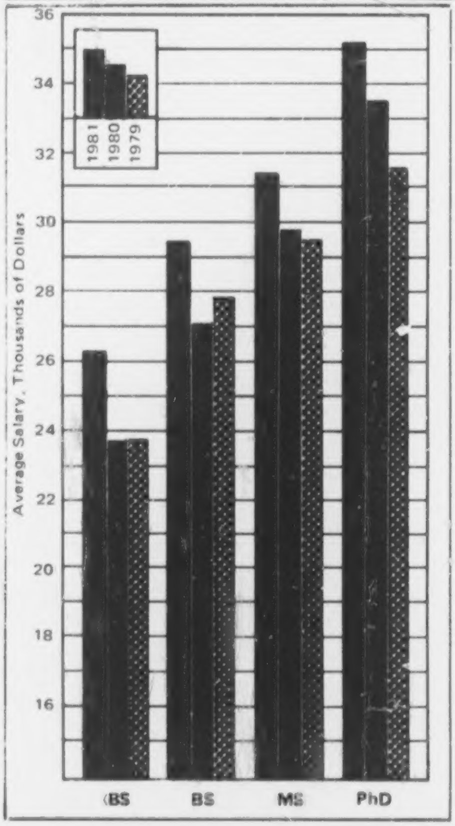
SOURCE: Industrial Research & Development Magazine, March 1981.

Chart 3. SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY YEARS OF EXPERIENCE, 1979–1981



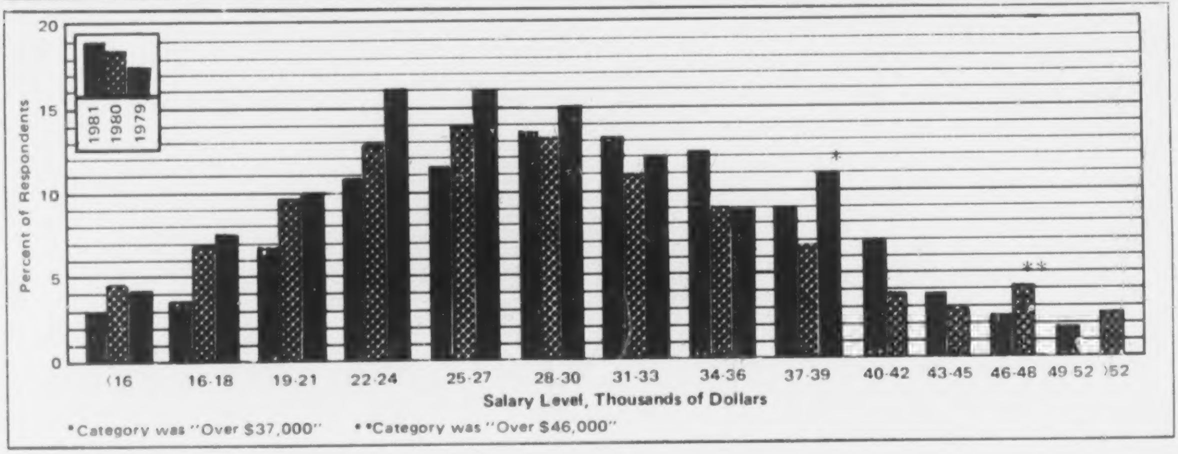
*Was "More than 30 years"

Chart 4. SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY DEGREE LEVEL, 1979-1981



SOURCE: Industrial Research & Development Magazine, March 1981.

Chart 5. SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT, 1979-1981



*Category was "Over $37,000"   **Category was "Over $46,000"

Chart 6. SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY SEX, 1981

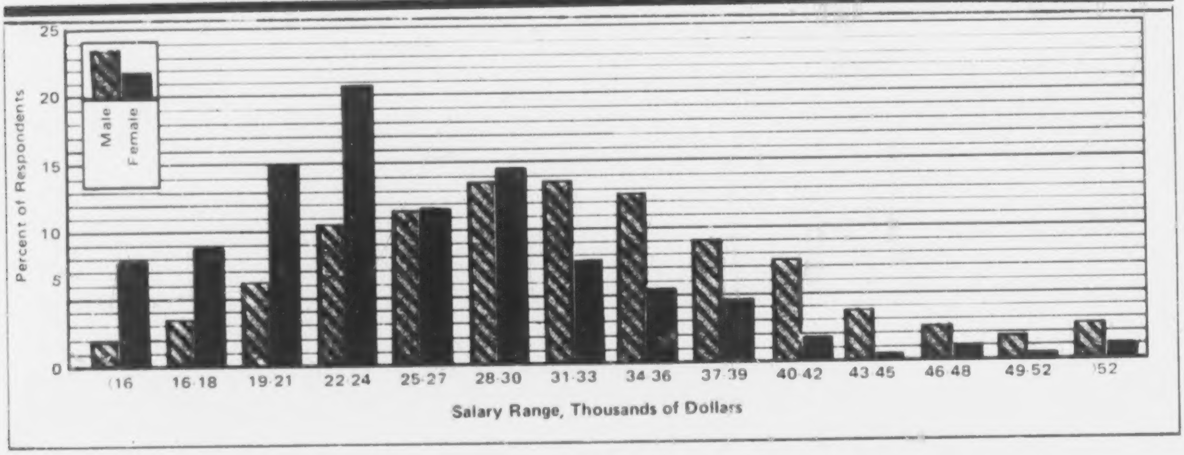
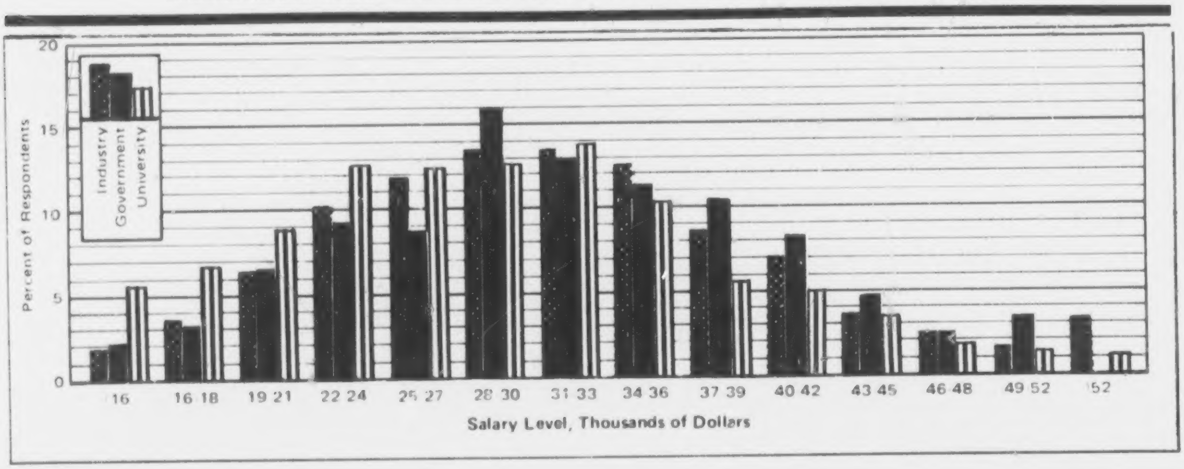


Chart 7. SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY TYPE OF EMPLOYER, 1981



SOURCE: U. S. Department of Labor, Bureau of Labor Statistics, Press Release dated June 26, 1981.

Table 49

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, March 1981

OCCUPATION AND CLASS	Number of Employees*	Average Salaries†	
		Monthly	Annual
Accountants II	21,975	$1,679	$20,153
Accountants III	34,450	1,962	23,545
Accountants IV	21,326	2,402	28,819
Chief Accountants II	938	2,963	35,560
Chief Accountants III	672	3,708	44,494
Chemists I	3,491	1,508	18,092
Chemists II	6,131	1,757	21,089
Chemists III	11,686	2,120	25,438
Chemists IV	11,221	2,567	30,801
Chemists V	8,708	3,055	36,663
Chemists VI	3,788	3,493	41,911
Chemists VII	1,622	4,070	48,845
Engineers I	28,233	1,809	21,712
Engineers II	48,312	1,972	23,663
Engineers III	108,063	2,229	26,746
Engineers IV	134,180	2,613	31,352
Engineers V	97,379	3,060	36,725
Engineers VI	45,433	3,552	42,622
Engineers VII	14,450	4,107	49,287
Engineers VIII	2,785	4,736	56,828
Engineering Technicians I	5,895	1,137	13,644
Engineering Technicians II	18,803	1,307	15,679
Engineering Technicians III	31,017	1,527	18,326
Engineering Technicians IV	35,540	1,803	21,630
Engineering Technicians V	19,056	2,051	24,609
Attorneys II	2,410	2,338	28,059
Attorneys III	3,135	3,031	36,373
Attorneys IV	2,535	3,783	44,853
Clerk, Accounting II	86,720	953	11,431
Clerk, Accounting III	57,797	1,121	13,454
Secretaries II	61,171	1,147	13,769
Secretaries III	106,881	1,298	15,576
Drafters II	12,494	1,075	12,900
Drafters III	24,399	1,301	15,612
Drafters IV	26,580	1,611	19,336
Computer Operators I	6,135	906	10,869
Computer Operators II	12,849	1,049	12,586
Computer Operators III	29,299	1,220	14,645
Computer Operators IV	26,580	1,475	17,704

*Occupational Employment estimates relate to the total in all establishments within scope of the survey and not the number actually surveyed.

†Preliminary.

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1980.

Table 50

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, MARCH 1980

OCCUPATION AND CLASS	Number of Employees	Monthly Salaries		Annual Salaries	
		Mean	Median	Mean	Median
Accountants II	19,560	$1,536	$1,475	$18,427	$17,700
Accountants III	32,903	1,775	1,733	21,299	20,792
Accountants IV	20,312	2,180	2,144	26,158	25,728
Chief Accountants II	891	2,722	2,782	32,662	33,387
Chief Accountants III	656	3,424	3,333	41,092	39,996
Chemists I	2,824	1,350	1,333	16,200	15,994
Chemists II	5,299	1,631	1,585	19,571	19,020
Chemists III	10,192	1,948	1,929	23,373	23,150
Chemists IV	10,519	2,307	2,285	27,681	27,420
Chemists V	8,135	2,816	2,795	33,793	33,540
Chemists VI	4,532	3,178	3,086	38,137	37,027
Chemists VII	1,695	3,824	3,565	45,883	42,783
Engineers I	20,813	1,618	1,624	19,411	19,488
Engineers II	41,742	1,774	1,750	21,285	21,000
Engineers III	95,382	2,013	1,985	24,160	23,821
Engineers IV	123,829	2,374	2,350	28,486	28,200
Engineers V	92,315	2,762	2,737	33,141	32,844
Engineers VI	42,719	3,188	3,160	38,259	37,920
Engineers VII	14,297	3,604	3,590	43,242	43,080
Engineers VIII	3,027	4,173	4,082	50,079	48,980
Engineering Technicians I	4,782	1,019	984	12,228	11,804
Engineering Technicians II	17,441	1,184	1,156	14,212	13,869
Engineering Technicians III	29,527	1,396	1,364	16,756	16,373
Engineering Technicians IV	34,128	1,629	1,614	19,547	19,365
Engineering Technicians V	18,054	1,860	1,840	22,323	22,080
Attorneys II	2,776	2,129	2,124	25,549	25,488
Attorneys III	3,174	2,753	2,717	33,034	32,600
Attorneys IV	2,753	3,405	3,332	40,864	39,984
Clerks Accounting I	31,935	734	702	8,806	8,421
Clerks Accounting II	88,878	865	802	10,377	9,840
Secretaries II	83,137	1,051	1,019	12,611	12,223
Secretaries III	90,534	1,168	1,133	14,018	13,596
Drafters I	2,581	851	821	10,216	9,854
Drafters II	11,764	946	946	11,689	11,352
Drafters III	22,813	1,192	1,150	14,308	13,800
Computer Operators II	6,285	1,001	956	12,016	11,471
Computer Operators III	29,710	1,080	1,050	12,957	12,595
Computer Operators IV	16,430	1,337	1,294	16,050	15,525

SOURCE: D. Dietrich Associates, Inc., Scientific Salaries Survey 1981, June 1981.

Table 51

NUMBER, AVERAGE AND MEDIAN SALARIES OF SCIENTISTS BY TITLE*, MAY 1981

TITLE*	Number of Employees	Weighted Average Base Salary	Firm's Actual Median Salary
Scientist I	609	$17,831	$18,000
Scientist II	1,152	20,894	20,000
Scientist III	1,139	26,177	24,300
Scientist IV	942	29,323	27,400
Scientist V	828	34,331	32,400
Scientist VI	576	38,639	38,300
Scientist VII	430	45,261	42,300
Scientist, Dept. Head	179	51,805	48,300

Table 52

NUMBER AND WEIGHTED AVERAGE SALARIES OF SCIENTISTS BY TITLE* AND TYPE OF EMPLOYER, 1981

TITLE*	Consulting Firms		Industry		Research & Development		Government		Utilities		All Firms
	Number	Average Salary	Number	Average Salary	Number	Average Salary	Number	Average Salary	Number	Average Salary	Average Salary
Scientist I	182	$16,844	175	$19,084	147	$17,922	80	$16,627	25	$19,544	$17,831
Scientist II	343	19,187	209	21,837	529	21,977	70	18,288	1	19,200	20,894
Scientist III	275	24,943	224	25,657	559	27,416	41	23,974	40	22,499	26,177
Scientist IV	204	26,235	265	29,295	423	31,391	18	24,359	32	24,687	29,323
Scientist V	209	34,548	310	33,172	266	36,160	20	32,933	23	28,037	34,331
Scientist VI	121	35,929	170	38,943	267	39,916	11	37,055	7	31,901	38,639
Scientist VII	79	45,212	104	43,546	225	45,422	20	52,377	2	46,860	45,261
Scientist, Dept. Head	58	49,653	36	49,556	75	56,360	7	37,865	3	39,040	51,805
TOTALS	1,471	27,109	1,493	29,893	2,491	31,147	267	24,009	133	24,637	29,339

* See original survey for definition of Title by level of responsibility.

SOURCE: Chemical and Engineering News, Vol. 55, June 21, 1976, pp. 47, 50; Vol. 56, June 20, 1977, p. 31; Vol. 57, June 25, 1979, p. 39; Vol. 59, June 22, 1981, p. 57.

Table 53

MEDIAN ANNUAL SALARIES FOR CHEMISTS AND CHEMICAL ENGINEERS OF ALL EXPERIENCE LEVELS BY DEGREE, 1973-1981 (WEIGHTED AVERAGE)

YEAR	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	Ph.D.	B. S.	M. S.	Ph.D.
1973	$16,800	$17,500	$20,500	$20,200	$22,000	$23,100
1974	17,500	18,400	21,700	21,300	22,400	24,800
1975	19,000	19,800	23,000	24,000	25,000	26,000
1976	19,800	20,500	24,700	26,000	27,000	29,000
1977	21,000	22,000	26,000	28,000	30,000	30,000
1978	22,000	24,000	27,400	30,000	32,000	32,000
1979	23,500	25,000	29,000	31,700	31,500	35,000
1980	25,000	26,000	31,200	35,000	35,000	38,000
1981	27,500	30,000	35,000	36,000	40,000	42,000

SOURCE: American Chemical Society, Salaries 1981 - Analysis of the American Chemical Society's 1981 Survey of Salaries and Employment, July 1981.

Table 54

MEDIAN ANNUAL SALARIES OF CHEMISTS BY TYPE OF EMPLOYER, DEGREE LEVEL AND SEX, 1981

TYPE OF EMPLOYER	DEGREE LEVEL AND SEX								
	Bachelor's			Master's			Ph.D.'s		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Private Industry	$30,000	$21,400	$28,000	$32,500	$27,200	$31,800	$39,700	$31,000	$39,000
Government	29,000	23,100	28,000	30,500	25,000	30,000	37,000	30,000	36,300
College/University	20,000	18,200	19,600	22,000	16,400	21,400	27,000	21,400	26,200
Other Non-Academic	24,200	19,000	23,500	30,000	20,900	27,000	35,600	25,500	35,000

Table 55

MEDIAN SALARIES OF CHEMISTS BY DEGREE LEVEL, SEX AND YEARS SINCE B. S., 1981

YEARS SINCE B. S.	BACHELOR'S		MASTER'S		Ph.D.	
	Men	Women	Men	Women	Men	Women
1 or less	$18,000	$17,500	$	$	$	$
2-4	19,300	18,500	22,500	23,000	24,840	31,000
5-9	22,500	21,000	23,000	21,900	29,000	29,000
10-14	27,576	23,986	27,780	25,500	30,500	26,820
15-19	31,250	24,400	32,000	29,425	33,000	27,029
20-24	32,760	24,000	33,000	25,250	36,320	29,645
25-29	35,000	30,700	36,000	29,000	39,000	28,750
30-34	36,500	27,750	36,000	27,800	45,000	35,758
35-39	38,750	25,910	38,000	28,520	45,000	28,250
40+	39,000	25,065	38,980	29,000	43,500	30,000
All Years	29,220	21,250	30,543	25,000	35,000	28,500

SOURCE: American Chemical Society, Salaries 1981 - Analysis of the American Chemical Society's 1981 Survey of Salaries and Employment, July 1981.

Table 56

MEDIAN SALARIES OF CHEMISTS EMPLOYED IN PRIVATE INDUSTRY BY DEGREE LEVEL, SEX AND YEARS SINCE B. S., 1981

YEARS SINCE B. S.	BACHELOR'S		MASTER'S		Ph.D.	
	Men	Women	Men	Women	Men	Women
1 or less	$18,500	$17,900	$	$	$	$
2-4	20,000	19,812	23,000	23,000	24,840	31,000
5-9	23,000	21,000	23,500	23,000	30,031	30,000
10-14	28,000	24,500	28,800	29,205	34,000	29,700
15-19	32,000	25,000	33,900	29,750	38,050	35,950
20-24	33,000	22,080	35,550	27,800	42,780	33,258
25-29	35,660	29,035	40,000	30,400	45,000	38,720
30-34	36,504	29,000	38,125	37,750	48,000	38,052
35-39	40,000	28,750	39,750	32,000	48,000	30,000
40+	40,000	24,500	41,000		49,750	
All Years	30,000	21,450	32,500	27,240	39,686	31,000

Table 57

MEDIAN ANNUAL SALARIES OF CHEMISTS EMPLOYED IN PRIVATE INDUSTRY BY WORK FUNCTION, DEGREE LEVEL AND SEX, 1981

DEGREE LEVEL AND SEX	WORK FUNCTION						
	Management Non R&D	Management R&D	Basic Research	Applied Research	Marketing	Forensic	Production and Quality Control
BACHELOR'S							
Men	$40,000	$39,000	$25,000	$27,000	$34,000	$24,600	$26,000
Women	28,050	27,100	19,828	21,576	21,250	21,250	21,000
Total	38,500	38,000	22,660	25,500	33,600	24,000	24,500
MASTER'S							
Men	38,000	42,000	27,000	29,500	33,800	28,100	28,650
Women	35,000	35,680	28,594	25,500	30,000	22,000	26,400
Total	37,630	41,400	27,000	29,000	33,700	26,250	28,200
Ph.D.							
Men	54,000	48,000	36,800	35,700	42,000	34,350	36,000
Women	27,000	38,640	30,000	31,700	26,000	31,000	26,000
Total	53,500	47,300	36,000	35,280	40,360	32,700	35,500

SOURCE: American Chemical Society, Salaries 1981 - Analysis of the American Chemical Society's 1981 Survey of Salaries and Employment, July 1981.

Table 58

MEDIAN ANNUAL SALARIES OF CHEMISTS EMPLOYED IN PRIVATE INDUSTRY BY DEGREE LEVEL, SPECIALTY AND SEX, 1981

DEGREE AND SEX	SPECIALTY								
	Analytical	Agricultural	Biochemistry	Environmental	Organic	Pharmaceutical†	Physical	Polymer*	Other Chemistry
BACHELOR'S									
Men	$27,125	$30,000	$30,500	$28,992	$32,000	$29,560	$30,100	$31,900	$32,000
Women	21,500	21,600	16,800	21,650	21,000	21,000	20,500	22,400	22,000
Total	25,000	29,000	27,600	26,900	30,550	27,000	28,825	30,000	30,100
MASTER'S									
Men	30,000	34,500	27,750	32,000	32,748	31,850	35,260	35,000	34,000
Women	25,000	22,600	30,000	27,800	28,334	30,600	36,000	28,000	28,400
Total	29,387	34,000	29,250	28,626	32,000	31,000	35,520	34,000	32,500
Ph.D.									
Men	36,000	40,000	40,200	40,000	40,000	40,200	40,000	40,000	37,500
Women	29,700	30,000	28,100	29,188	33,516	38,000	30,050	32,640	31,850
Total	35,000	40,000	40,000	38,400	40,000	40,000	39,900	40,000	37,200

* Also includes macromolecular chemistry. † Also includes medicinal and clinical chemistry.

Table 59

MEDIAN AND MEAN SALARIES OF FULL-TIME EMPLOYED CHEMISTS BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1981

GEOGRAPHICAL REGION	BACHELOR'S		MASTER'S		Ph.D.	
	Median	Mean	Median	Mean	Median	Mean
Pacific	$28,530	$31,571	$29,440	$30,931	$35,000	$37,727
Mountain	24,900	26,563	27,000	28,324	31,400	33,879
West North Central	24,250	28,045	25,850	28,592	30,000	32,521
East North Central	27,000	29,291	29,800	32,313	34,800	37,402
West South Central	27,700	29,900	31,300	34,105	34,550	37,545
East South Central	27,360	30,604	26,300	32,707	32,000	34,735
Middle Atlantic	28,394	30,917	30,700	35,069	36,500	39,025
South Atlantic	29,120	31,881	30,250	32,516	36,000	37,447
New England	24,000	28,316	28,000	29,313	33,200	34,549
All Regions	27,500	30,242	30,000	32,584	35,000	37,146

SOURCE: American Chemical Society, *Salaries 1981 - Analysis of the American Chemical Society's 1981 Survey of Salaries and Employment*, July 1981.

Table 60

1981 MEDIAN AND MEAN SALARIES OF CHEMISTS BY DEGREE LEVEL AND SELECTED STATES

SELECTED STATES	B. S.		M. S.		Ph.D.	
	Median	Mean	Median	Mean	Median	Mean
California	$29,000	$31,927	$30,650	$32,509	$38,000	$41,298
Texas	27,700	29,301	33,000	36,118	41,000	44,343
Illinois	28,000	30,889	31,500	33,610	36,260	40,692
Michigan	26,963	29,306	31,000	35.427	38,000	41,318
Ohio	27,000	29,926	31,685	33,717	37,000	38,624
New Jersey	30,000	33,681	31,300	37,558	39,950	42,548
New York	29,000	30,704	31,000	35,017	39,000	42,014
Pennsylvania	25,608	29,010	30,000	33,340	38,620	41,811
Other States	26,800	29,894	29,790	31,910	38,000	40,601
Total All States	28,000	30,510	30,250	33,730	38,260	41,182

Table 61

1981 MEDIAN SALARY OF INDUSTRIAL CHEMISTS AND ALL CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS	BACHELOR'S		MASTER'S		Ph.D.	
	All	Industrial	All	Industrial	All	Industrial
0-1	$17,900	$18,000	$	$	$	$
2-4	19,000	19,900	23,000	23,000		
5-9	22,000	22,500	22,500	23,500	29,000	30,000
10-14	27,000	28,000	27,000	29,000	30,000	33,500
15-19	30,000	31,400	31,700	33,100	33,000	38,000
20-24	32,400	32,200	32,000	35,000	36,000	42,400
25-29	34,500	35,000	35,000	38,700	38,100	45,000
30-34	35,500	36,300	36,000	38,000	45,000	48,000
35-39	36,200	38,500	35,500	39,000	43,200	48,000
40+	38,000	38,200	37,000	41,000	43,000	49,700
Overall	27,500	28,000	30,000	31,800	35,000	39,000

SOURCE: American Chemical Society, Salaries 1981 - Analysis of the American Chemical Society's 1981 Survey of Salaries and Employment, July 1981.

Table 62

MEDIAN AND MEAN SALARIES OF EMPLOYED CHEMICAL ENGINEERS BY DEGREE LEVEL AND YEARS SINCE B. S., 1981

YEARS SINCE B. S.	BACHELOR'S		MASTER'S		DOCTORATE	
	Median	Mean	Median	Mean	Median	Mean
1 or less	$22,350	$21,600	$	$	$	$
2-4	24,200	30,191	25,800	25,167		
5-9	27,000	26,953	28,060	28,147	32,250	31,096
10-14	30,800	33,664	34,580	33,079	35,125	35,187
15-19	37,000	38,863	37,450	36,895	36,500	39,671
20-24	39,565	38,480	38,500	40,611	49,200	52,058
25-29	39,120	42,937	45,000	47,356	48,000	53,446
30-34	40,800	46,080	44,000	47,125	45,000	52,939
35-39	41,000	48,779	47,400	50,521	49,050	54,904
40+	40,000	52,702	42,100	53,099	44,066	53,168
All Years	36,000	40,847	40,000	42,822	42,000	46,756

SOURCE: American Institute of Chemists, The Chemist, November 1980.

Table 63

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1980

GEOGRAPHICAL REGION	B.S.	M.S.	Ph.D.	Overall
Pacific	$27,800	$33,000	$36,000	$34,000
Mountain			36,800	30,000
West North Central	15,000		30,000	26,000
East North Central	30,000	37,600	38,000	36,400
West South Central	30,200		40,400	36,000
East South Central			34,500	33,000
Middle Atlantic	30,000	36,000	39,000	36,600
South Atlantic	25,000	31,000	36,000	25,000
New England			39,500	32,000

* American Institute of Chemists.

SOURCE: American Institute of Chemists, The Chemist, November 1980

Table 64

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY TYPE OF EMPLOYER AND DEGREE, 1980

TYPE OF EMPLOYER	B.S.	M.S.	Ph.D.
Industry	$30,000	$32,000	$41,000
Education	6,300		28,000
Non-Profit			37,600
Government	29,600		40,000
Self-Employed			27,500
Total Salary	28,000	31,500	37,000
Total Income	30,000	35,000	40,000

Table 65

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY DEGREE SPECIALITY AND DEGREE LEVEL, 1980

DEGREE SPECIALITY	B.S.	M.S.	Ph.D.
Analytical	$27,000	$32,000	$35,000
Biochemistry	17,500	32,700	39,000
Inorganic	23,400		35,000
Organic	37,000	36,600	36,500
Physical	9,300		35,000
Polymer	25,000	22,500	38,000
Chemical Engineering	29,500	35,500	45,500
Other	35,000	28,000	42,500

Table 66

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY WORK ACTIVITY AND DEGREE LEVEL, 1980

WORK ACTIVITY	B.S.	M.S.	Ph.D.
Research & Development	$30,000	$35,300	$40,000
Management	35,000	34,300	40,000
Services	27,000	28,000	35,000
Consulting	26,500		37,000
Teaching			28,500
Other	6,200		31,000

* American Institute of Chemists.

SOURCE: 1981 Salary Survey, American Psychological Association, September 1981.

Table 67

SELECTED 11-12 MONTH MEDIAN AND MEAN SALARIES FOR DOCTORAL-LEVEL PSYCHOLOGISTS† BY EMPLOYMENT SETTING, TYPE OF POSITION AND YEARS OF WORK EXPERIENCE, 1981

Employment Setting Type of Position	Years of Work Experience	Median	Mean
Community Mental Health Center (CMHC) Clinical psychologist, direct human service delivery	0-1	*	*
	2-4	21,111	21,127
	5-9	24,579	24,845
	10-14	26,688	27,066
	15-19	27,500	30,200
	20-24	29,500	29,875
	25-29	27,500	28,667
	Over 30	29,750	28,800
Public Mental or Psychiatric Hospital Clinical psychologist, direct human service delivery	0-1	*	*
	2-4	23,417	22,703
	5-9	26,083	26,233
	10-14	28,750	28,081
	15-19	29,500	28,600
	20-24	29,750	30,222
	25-29	30,000	29,000
	Over 30	*	*
Business or Consulting Firm Industrial/organizational psychologist, applied psychology	0-1	*	*
	2-4	36,333	38,316
	5-9	35,400	41,487
	10-14	46,667	49,551
	15-19	54,000	59,500
	20-24	59,750	60,462
	25-29	62,250	64,059
	Over 30	60,250	63,533

† Members of the American Psychological Association.

* Salaries not provided for those positions reporting fewer than 5 individuals.

SOURCE: Institute of Food Technologists, Food Technology, 1980.

Table 68

NUMBER AND MEDIAN SALARY RANGES OF FOOD SCIENTISTS/TECHNOLOGISTS BY YEARS OF PROFESSIONAL EXPERIENCE, HIGHEST DEGREE OBTAINED AND SEX, 1978

HIGHEST DEGREE OBTAINED AND SEX	YEARS OF PROFESSIONAL EXPERIENCE									
	0 - 5		6 - 11		11 - 15		16 - 20		More than 20	
	Number	Median Range	Number	Median Range	Number	Median Range	Number	Median Range	Number	Median Range
NO DEGREE										
Total	41	$16,000-17,999	46	$16,000-17,999	33	$20,000-21,999	44	$24,000-25,999	128	$30,000-31,999
Men	24	20,000-21,999	32	18,000-19,999	25	22,000-23,999	43	24,000-25,999	122	30,000-31,999
Women	14	14,000-15,999	10	14,000-15,999	8	14,000-15,999	1	14,000-15,999	3	18,000-19,999
B. S.										
Total*	836	14,000-15,999	466	20,000-21,999	369	26,000-27,999	300	28,000-29,999	779	30,000-31,999
Men	483	16,000-17,999	361	20,000-21,999	329	26,000-27,999	265	28,000-29,999	698	30,000-31,999
Women	316	12,000-13,999	83	16,000-17,999	32	18,000-19,999	23	20,000-21,999	42	20,000-21,999
M. S.										
Total*	394	16,000-17,999	288	22,000-23,999	175	26,000-27,999	130	28,000-29,999	369	32,000-33,999
Men	237	18,000-19,999	212	22,000-23,999	133	28,000-29,999	109	30,000-31,999	313	32,000-33,999
Women	136	16,000-17,999	62	18,000-19,999	33	18,000-19,999	18	18,000-19,999	36	22,000-
PH.D.										
Total*	344	22,000-23,999	312	26,000-27,999	195	30,000-31,999	173	32,000-33,999	456	36,000-37,999
Men	270	24,000-25,999	262	28,000-29,999	173	32,000-33,999	151	34,000-35,999	386	40,000-41,999
Women	59	20,000-21,999	35	18,000-19,999	20	20,000-21,999	13	24,000-25,999	46	30,000-31,999

* Includes Men + Women + No Sex Marked.

SOURCE: Institute of Food Technologists, Food Technology, January 1980.

Table 69

NUMBER AND MEDIAN SALARY RANGES OF FOOD SCIENTISTS/TECHNOLOGISTS BY YEARS OF PROFESSIONAL EXPERIENCE, EMPLOYMENT AREA AND LEVEL OF DEGREE, 1978

EMPLOYMENT AREA	YEARS OF PROFESSIONAL EXPERIENCE									
	0 - 5		6 - 10		11 - 15		16 - 20		More than 20	
	Number	Median Range	Number	Median Range	Number	Median Range	Number	Median Range	Number	Median Range
INDUSTRY										
No Degree	41	$16,000-17,999	42	$16,000-17,999	31	$20,000-21,999	43	$24,000-25,999	119	$30,000-31,999
B. S.	760	16,000-17,999	426	20,000-21,999	349	26,000-27,999	259	28,000-29,999	681	30,000-31,999
M. S.	322	18,000-19,000	236	22,000-23,999	136	28,000-29,999	91	30,000-31,999	270	34,000-35,999
Ph.D.	163	24,000-25,999	166	28,000-29,999	99	34,000-35,999	58	38,000-39,999	165	42,000-43,999
EDUCATION										
No Degree										
B. S.	10	12,000-13,999	4	10,000-11,999	5	16,000-17,999	0		10	24,000-25,999
M. S.	37	14,000-15,999	20	14,000-15,999	18	16,000-17,999	13	18,000-19,999	36	22,000-23,999
Ph.D.	136	20,000-23,999	124	22,000-23,999	66	24,000-25,999	76	28,000-29,999	194	32,000-33,999
GOVERNMENT										
No Degree	1		0		1		0		3	26,000-27,999
B. S.	29	12,000-13,999	23	16,000-17,999	11	24,000-25,999	21	24,000-25,999	37	32,000-33,999
M. S.	21	20,000-21,999	20	18,000-19,999	12	26,000-27,999	17	26,000-27,999	29	30,000-31,999
Ph.D.	27	26,000-27,999	19	24,000-25,999	15	32,000-33,999	24	32,000-33,999	55	40,000-41,999
OTHER*										
No Degree	1		4	14,000-15,999	1		1		5	30,000-31,999
B. S.	36	14,000-15,999	13	20,000-21,999	7	34,000-35,999	6	32,000-33,999	51	32,000 33,999
M. S.	14	14,000-15,999	12	20,000-21,999	9	18,000-19,999	8	22,000-23,999	32	28,000-29,999
Ph.D.	18	22,000-23,999	9	32,000-33,999	11	32,000-33,999	12	34,000-35,999	39	44,000-45,999

SOURCE: Institute of Food Technologists, Food Technology, January 1980.

Table 70

MEDIAN ANNUAL SALARY RANGES OF FOOD SCIENTISTS/TECHNOLOGISTS BY DEGREE LEVEL AND GEOGRAPHIC REGION, 1978

GEOGRAPHIC REGION	DEGREE LEVEL							
	No Degree		B. S.		M. S.		Ph. D.	
	Percent	Median Range	Percent	Median Range	Percent	Median Range	Percent	Median Range
New England	3.0	$20,000-21,999	38.5	$20,000-21,999	26.9	$24,000-25,999	31.6	$30,000-31,999
Middle Atlantic	5.4	24,000-25,999	48.5	26,000-27,999	24.6	26,000-27,999	21.5	34,000-35,999
South Atlantic	2.8	22,000-23,999	39.7	22,000-23,999	25.8	24,000-25,999	31.7	28,000-29,999
East South Central	4.8	22,000-23,999	40.5	22,000-23,999	22.2	22,000-23,999	32.5	26,000-27,999
West South Central	4.9	18,000-19,999	40.0	22,000-22,999	22.1	20,000-21,999	33.0	26,000-27,999
Pacific	4.8	26,000-27,999	54.8	22,000-23,999	21.9	24,000-25,999	18.5	30,000-31,999
Mountain	6.3	42,000-43,999	39.1	20,000-21,999	22.4	20,000-21,999	32.2	30,000-31,999
West North Central	5.0	20,000-21,999	44.1	22,000-23,999	20.8	20,000-21,999	30.1	30,000-31,999
East North Central	6.2	24,000-25,999	48.2	22,000-23,999	22.8	24,000-25,999	22.8	30,000-31,999

SOURCE: Vine Associates, 1980 Petroleum Salary Survey, February 1981.

Table 71

SALARY RANGES OF SELECTED PERSONNEL IN THE PETROLEUM INDUSTRY BY YEARS OF EXPERIENCE, 1980

OCCUPATIONAL GROUP	YEARS OF EXPERIENCE				
	2-4	5-7	5-10	7-10	10+
Geologists		$26,800-$40,800		$32,800-$52,100	$38,100-$68.500
Geophysicists		25,000-36,600		30,800-44,600	36,800-64,200
Landmen (Earth Scientists)	$22,300-$27.800		$36,800-$63,500		

SOURCE: Hitchcock Publishing Company, Infosystems, June 1981

Table 72

AVERAGE AND MEDIAN WEEKLY SALARIES IN DATA PROCESSING BY JOB DESCRIPTION, 1981

JOB DESCRIPTION	Number Reported	Average Salary	Median Salary
Top Management Official	145	$868	$822
Data Base Systems Manager	121	558	530
Manager of Data Processing	806	601	576
Asst. Manager of Data Processing	171	544	519
Project/Team Leader	513	595	596
Mgr./Supvr. of Computer Systems Analysis and Programming	451	639	615
Lead Computer Systems Analyst & Programmer	438	526	519
Senior Computer Systems Analyst & Programmer	847	465	461
Junior Computer Systems Analyst & Programmer	717	404	393
Mgr./Supvr. of Computer Systems Analysis	48	652	615
Lead Computer Systems Analyst	85	563	528
Senior Computer Systems Analyst	298	505	493
Junior Computer Systems Analyst	131	402	392
Mgr./Supvr. of Systems Programming	113	614	585
Lead Systems Programmer	133	567	576
Senior Systems Programmer	261	459	457
Junior Systems Programmer	185	392	402
Systems Programmer Trainee	94	342	357
Mgr./Supvr. of Applications Programming	170	656	615
Lead Applications Programmer	323	515	519
Senior Applications Programmer	660	423	416
Junior Applications Programmer	842	349	326
Applications Programmer Trainee	384	284	288
Data Communications Manager	43	558	549
Data Communications Operator	120	326	326
Mgr./Supvr. of Computer Operations	418	442	423
Lead Computer Operator	545	326	340
Senior Computer Operator	912	284	283
Junior Computer Operator	925	244	240
Computer I/0 Control Manager	211	291	276
Tape Librarian	176	249	230
Key Entry Supervisor	253	303	286
Lead Key Entry Operator	550	255	240
Senior Key Entry Operator	1827	220	219
Junior Key Entry Operator	1179	191	190

SOURCE: Hitchcock Publishing Company, Infosystems, June 1981.

Table 73

AVERAGE WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY JOB DESCRIPTION AND GEOGRAPHIC AREA, 1981

JOB DESCRIPTION	GEOGRAPHIC AREA								
	New England	Middle Atlantic	South Atlantic	East North Central	East South Central	West North Central	West South Central	Mountain	Pacific
Top Management Official	$828	$867	$905	$828	$908	$842	$952	$802	$923
Data Base Systems Manager	678	585	638	741	467	549	413	571	820
Manager of Data Processing	637	596	597	596	579	569	622	582	623
Asst. Mgr. of Data Processing	510	524	641	475	490	509	507	505	488
Project/Team Leader	500	623	595	581	468	493	660	557	676
Mgr./Supvr. of Computer System Analysis and Programming	538	587	675	641	590	551	671	607	658
Lead Computer Systems Analyst and Programmer		477	485	508	508	487	590	514	614
Senior Computer Systems Analyst and Programmer	408	469	450	459	452	424	483	465	513
Junior Computer Systems Analyst and Programmer	315	370	373	370	384	369	469	427	391
Mgr./Supvr. of Computer Systems Analysis	519	651	600	611			732		
Lead Computer Systems Analyst	476	584	512	576	472	557	655		490
Senior Computer Systems Analyst		460	488	495	470	553	542	525	
Junior Computer Systems Analyst	295	386	358	415	392	418	383	339	
Mgr./Supvr. of Systems Programming	560	610	615	572	613	623	659	607	730
Lead Systems Programmer	497	561	531	517	516	483	635	549	650
Senior Systems Programmer	360	421	443	461	430	429	579	456	541
Junior Systems Programmer		363	371	382	348	336	413	403	449
Programmer Trainee		342	298	244		292	376	315	324
Mgr./Supvr. of Applications Programming	509	584	604	695	461	592	717	547	674
Lead Applications Programmer	432	470	137	519	350	417	614	531	584
Senior Applications Programmer	337	444	445	408	348	377	474	401	464
Junior Applications Programmer	313	344	317	310	259	297	461	339	359
Applications Programmer Trainee	290	266	287	266	254	254	319	257	276
Data Communications Mgr.	562	611	474	571		468	658	518	
Data Communications Operator	230	299	264	332		319	376	335	
Mgr./Supvr. of Computer Operations	431	435	415	437	442	401	480	480	482
Lead Computer Operator	304	319	331	315	327	288	382	318	353
Senior Computer Operator	282	278	283	283	263	273	285	273	322
Junior Computer Operator	260	230	264	237	236	252	236	232	262
Computer I/0 Control Manager	270	282	292	299	274	274	275	310	309
Tape Librarian	215	227	257	241	233	197	242	226	320
Key Entry Supervisor	265	297	274	295	233	271	334	300	354
Lead Key Entry Operator	225	240	229	241	206	230	261	266	334
Senior Key Entry Operator	211	217	214	227	188	200	243	203	235
Junior Key Entry Operator	176	178	185	192	180	175	202	181	232

Note: Blanks denote insufficient information.

SOURCE: 1981 Computer Salary Survey and Career Planning Guide, Source EDP.

Table 74

MEDIAN SALARIES OF NON-MANAGEMENT COMPUTER PROFESSIONALS BY POSITION AND LENGTH OF EXPERIENCE, 1981

NON-MANAGEMENT POSITIONS	LENGTH OF EXPERIENCE.				
	6 Months-1 Year	1 Year-2 Years	2 Years-4 Years	Over 4 Years	Over 6 Years
Commercial Programmers and Programmer Analysts	$18,200	$20,200	$23,300	$27,300	$
Scientific/Engineering Programmers & Programmer Analysts	17,500	19,800	23,700	29,500	
Mini/Microcomputer Programmers & Programmer Analysts	18,200	22,100	25,100	29,600	
Systems (Software) Programmers		22,500	28,400	33,500	
Data Base Specialists		25,200	29,000	34,400	
Data Communications Programmers & Programmer Analysts		24,600	28,300	33,700	
Documentation Specialists	18,700	19,900	23,800	24,800	
EDP Auditors		21,400	27,000	33,900	
Senior Analysts, Project Leaders & Consultants			26,800	28,200*	33,600

* Salary for 4-6 years.

Table 75

MEDIAN SALARIES OF MANAGEMENT COMPUTER PROFESSIONALS BY POSITION AND SIZE OF COMPUTER SYSTEM, 1981

MANAGEMENT POSITION	SIZE OF COMPUTER SYSTEM		
	SMALL	MEDIUM	LARGE
Technical Services Managers	$32,900	$36,300	$42,000
Systems & Programming Managers	33,700	37,400	41,300
Operations Managers	24,700	29,100	38,100
Information Systems Directors	33,100	43,200	52,700

SOURCE: American Administrative Management Society, 1980-81 AMS Office Salaries Directory for United States and Canada.

Table 76

NUMBER, AVERAGE AND MEDIAN WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY GEOGRAPHICAL REGION AND POSITION, 1981

GEOGRAPHICAL REGION	DATA PROCESSING POSITION			
	Programmer	Programmer/ Analyst	Computer Operator	Data Entry Operator
EASTERN U.S.				
No. Employees	2,723	2,365	2,466	5,858
Average	$332	$401	$269	$210
Median	312	387	265	205
EAST CENTRAL U.S.				
No. Employees	1,702	1,233	1,654	3,933
Average	$368	$394	$285	$216
Median	362	387	275	205
WEST CENTRAL U.S.				
No. Employees	1,346	1,476	1,432	3,321
Average	$349	$406	$264	$208
Median	337	425	255	195
SOUTHERN U.S.				
No. Employees	1,440	1,505	1,682	3,516
Average	$331	$402	$257	$199
Median	312	387	245	195
WESTERN U.S.				
No. Employees	733	1,166	916	5,763
Average	$346	$427	$275	$221
Median	337	425	265	205
TOTAL U.S.				
No. Employees	7,944	7,745	8,150	22,391
Average	$344	$405	$270	$212
Median	337	425	255	205

Table 77

NUMBER, AVERAGE & MEDIAN WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY TYPE OF BUSINESS AND POSITION, 1981

TYPE OF BUSINESS	DATA PROCESSING POSITION			
	Programmer	Programmer/ Analyst	Computer Operator	Data Entry Operator
MANUFACTURING/PROCESSING				
No. of Employees	2,035	2,170	2,553	4,745
Average	$347	$410	$285	$232
Median	337	362	275	215
BANKING/INSURANCE/FINANCIAL				
No. of Employees	2,900	2,691	2,150	5,269
Average	$336	$398	$252	$192
Median	337	387	245	167
RETAIL/WHOLESALE SALES & DISTR.				
No. of Employees	463	298	661	1,562
Average	$328	$406	$260	$207
Median	312	425	255	205
GOVERNMENT (ALL LEVELS)				
No. of Employees	1,082	909	832	6,088
Average	$374	$385	$260	$204
Median	362	387	275	195
ALL OTHER TYPES				
No. of Employees	1,464	1,677	1,934	4,727
Average	$339	$421	$267	$225
Median	337	425	255	215

SOURCE: Association of Data Processing Services Organizations, 1980 ADPSO Compensation Survey.

Table 78

MEDIAN ANNUAL SALARIES OF APPLICATIONS PROGRAMMER/ANALYSTS BY GEOGRAPHICAL AREA AND LEVEL, 1980

Geographical Area	APPLICATIONS PROGRAMMER/ANALYST			
	Lead	Senior	Intermediate	Associate
Northeast	$26,500	$23,000	$19,000	$16,000
Southeast	26,400	22,461	18,000	14,681
Midwest	23,920	22,620	18,980	16,952
Southwest	28,960	24,000	19,000	
Northwest	24,600	23,200	15,600	14,400
California & Hawaii	26,260	24,500	21,320	18,980
Overall	26,200	23,000	19,050	16,900

Table 79

MEDIAN ANNUAL SALARIES OF SYSTEMS/SOFTWARE PROGRAMMER/ANALYSTS BY GEOGRAPHICAL AREA AND LEVEL, 1980

Geographical Area	SYSTEMS/SOFTWARE PROGRAMMER/ANALYST			
	Lead	Senior	Intermediate	Associate
Northeast	$28,600	$28,000	$20,615	$17,700
Southeast	26,000	23,000	19,000	16,600
Midwest	28,600	25,000	20,512	17,680
Southwest	25,404	24,000	18,800	13,800
Northwest	24,820	-	-	-
California & Hawaii	22,500	25,300	20,000	18,200
Overall	27,456	25,300	20,200	17,500

SOURCE: U. S. Department of Labor, Bureau of Labor Statistics, Area Wage Survey: Washington, D.C. - Maryland - Virginia, Metropolitan Area, March 1981, Bulletin 3010-6.

Table 80

NUMBER AND AVERAGE WEEKLY EARNINGS OF SELECTED TECHNICAL OCCUPATIONS BY INDUSTRY DIVISION AND SEX IN WASHINGTON, D. C. METROPOLITAN AREA, MARCH 1981

OCCUPATION AND INDUSTRY DIVISION	MEN		WOMEN	
	No. of Workers	Weekly Earnings	No. of Workers	Weekly Earnings
Computer Systems Analysts (Business)				
Nonmanufacturing: Transportation & Utilities	113	$449.50	55	$455.50
Computer Systems Analysts (Business) II				
Nonmanufacturing: Transportation & Utilities	55	464.00	31	478.00
Computer Programmers (Business)	639	383.50	319	378.00
Manufacturing	66	395.50	55	385.50
Nonmanufacturing	573	382.00	264	376.00
Computer Programmers (Business) I	131	332.00	109	332.00
Nonmanufacturing	126	335.00	103	338.50
Computer Programmers (Business) II	327	380.00	115	378.50
Nonmanufacturing	300	381.50	110	380.00
Computer Programmers (Business) III	181	427.00	95	429.50
Drafters	517	319.00	166	261.50
Nonmanufacturing	416	319.00	133	253.00
Drafters III	180	294.50	70	259.50
Nonmanufacturing	158	302.50	62	253.50

SOURCE: American Institute of Physics, Society Membership, 1980 Profile: Stability and Change, R-301, October 1981.

Table 81

1980 SALARIES OF PHYSICISTS BY DEGREE LEVEL

Degree Level	No.	Median	Mean
Ph.D.	1,312	$32,200	$33,700
Master's	272	28,000	30,100
Bachelor's	132	31,500	33,500

Table 82

1980 SALARIES OF PH.D. PHYSICISTS BY PRINCIPAL WORK ACTIVITY

Principal Work Activity	No.	Median
Teaching	351	$27,000
Basic Research	393	31,500
Applied Research	291	35,000
Design, Development and Engineering	115	35,900
Administration	113	43,000
Other	40	35,000

Table 83

1980 SALARIES OF PH.D. PHYSICISTS BY YEARS SINCE PH.D.

Years Since Ph.D.	No.	Median	Mean
0-4	207	$25,000	$24,600
5-9	275	29,200	29,400
10-14	288	32,500	33,100
15-19	198	35,400	36,800
20+	316	40,000	42,100

SOURCE: American Institute of Physics, Society Membership, 1980 Profile: Stability and Change, R-301, October 1981.

Table 84

1980 SALARIES OF PHYSICISTS BY TYPE OF EMPLOYER AND DEGREE LEVEL

EMPLOYER	Ph.D.'s			Master's			Overall*		
	No.	Median	Mean	No.	Median	Mean	No.	Median	Mean
University							618	$29,000	$30,000
9-10 month	288	$27,600	$28,900						
11-12 month	219	31,400	32,500						
College							85	22,800	23,500
9-10 month	56	20,600	21,700						
Industry/Self-Employed	315	36,000	39,100	107	33,000	34,800	521	35,000	37,700
Government	139	37,000	38,000	40	35,100	34,800	196	36,200	37,100
FFR & DC†	154	35,000	35,300				171	34,700	35,100
Secondary School				36	21,900	22,000	62	21,700	22,000
Other	37	35,500	38,400				58	35,100	36,400

* Includes physicists at all degree levels.

† Federally-funded research and development centers.

Table 85

1979 AND 1980 SALARIES OF PHYSICISTS BY EMPLOYMENT SECTOR AND SEX

EMPLOYMENT SECTOR	Male			Female		
	No.	Median	Mean	No.	Median	Mean
Academic						
1979		$24,000	$25,400		$19,100	$20,100
1980	547	27,200	29,000	24	20,700	22,500
Non Academic						
1979		32,100	34,000		28,100	29,000
1980	606	36,000	38,300	24	32,000	33,400

Table 86

1980 SALARIES OF PH.D. PHYSICISTS BY GEOGRAPHIC REGION

GEOGRAPHIC REGION	No.	Median	Mean
New England	106	$32,000	$32,400
Middle Atlantic	241	33,500	35,000
South Atlantic	206	32,000	33,800
East North Central	176	31,000	32,500
East South Central	46	29,300	28,500
West North Central	60	28,000	28,200
West South Central	68	29,100	30,500
Mountain	103	34,000	34,600
Pacific	275	35,000	35,700

SOURCE: U.S. Department of HHS, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, April 1981.

Table 87

AVERAGE ANNUAL SALARIES FOR SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES BY STATE, 1981

STATE	POSITION					
	LABORATORY AIDE I	LABORATORY TECHNICIAN I	MICRO-BIOLOGIST I	CHEMIST	ASST. LAB. DIRECTOR	LAB DIRECTOR
Alabama	$9,919	$11,733	$16,192	$	$30,446	$35,796
Alaska	15,918	17,928	24,648			51,252
Arizona		12,524		16,427		35,880
Arkansas	7,813	9,230	11,752		19,994	26,039
California	11,868	15,246	14,592	16,356	36,000	46,770
Colorado	9,504	12,738	15,486	15,486		34,554
Connecticut	9,923	11,113	13,173	13,173	33,212	40,409
Delaware	8,734	9,651	14,365	14,365		39,669
D.C.	9,939	14,780	18,578	16,814	39,114	49,305
Florida	7,528	10,137	13,269	14,052	24,639	28,168
Georgia	9,069	10,449	15,525	15,525	28,470	31,047
Hawaii	10,410	12,324				30,312
Idaho	9,180	10,626	14,244	14,244	28,206	34,278
Illinois	10,404	11,514	15,054	16,560		39,336
Indiana	10,075	11,440	16,094	16,094	34,424	50,427
Iowa	8,043	10,926	14,635	14,635	34,130	33,260
Kansas		9,972	17,928	17,928	34,752	43,158
Kentucky	7,914	9,168	14,928	14,928		45,522
Louisiana	9,096	11,400	16,926	15,486	24,684	40,374
Maine	9,631	11,461	14,092	14,675	22,485	25,335
Maryland		9,724	13,466		46,726	40,500
Massachusetts	8,664	11,076	14,456	14,456	26,702	28,964
Michigan		15,305	15,764	15,764	41,927	45,164
Minnesota	10,284	11,150	15,462	15,462	30,642	36,154
Mississippi	7,290	7,790	14,100		25,260	30,750
Missouri	8,304	11,712	14,376	14,376	23,472	29,502
Montana	9,726	12,347	14,543	14,543		24,442
Nebraska	7,260	8,556	12,054	12,054	20,634	23,304
Nevada	9,619	11,959	14,281	14,281		32,899
New Hampshire	7,806	10,640	12,182			22,588
New Jersey	7,956	11,754	13,089	13,089		36,113
New Mexico	9,348		12,006	12,006	29,136	30,588
New York	5,870	8,775	11,614	11,614		50,600
North Carolina	8,232	11,592	16,524	15,144	28,992	36,744
North Dakota	8,059	10,283	15,946	15,946	25,[illegible]65	31,575
Ohio	9,100	10,837	13,780	13,780	24,856	27,363
Oklahoma	8,946	10,896	15,516		28,350	32,016
Oregon	9,456	12,552	14,766		22,866	30,684
Pennsylvania	10,230	12,186	16,920	16,920	28,294	32,089
Rhode Island	10,572	12,386	14,999	15,585	28,137	32,797
South Carolina	8,672	10,973	15,017	15,619	25,007	45,035
South Dakota	7,829	10,967	14,574	14,574		27,021
Tennessee	8,112	9,456	14,058		21,276	25,530
Texas	8,268	11,496	14,976	14,976	31,500	35,600
Utah	10,398	13,812	18,134	18,134		40,789
Vermont	8,753	11,030	14,245	14,245	20,371	28,991
Virginia	7,785	9,300	15,880	17,355	24,795	29,630
Washington	9,600	13,566	16,128	17,364		35,538
West Virginia	9,540		14,748	14,748	20,880	31,668
Wisconsin	12,464	12,196	16,458	16,458		41,800
Wyoming		15,030				36,612
Guam	9,322	10,528	14,840	14,840	19,910	22,640
Puerto Rico	5,484		9,180	9,420		21,360
Virgin Islands	7,003					21,569

NOTE: Blanks indicate no position reported.

SOURCE: U.S. Department of HHS, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, April 1981.

Table 88

AVERAGE ANNUAL SALARIES OF SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES, 1976 and 1981

POSITION CLASSIFICATION	AVERAGE ANNUAL SALARIES		PERCENT INCREASE
	1976	1981	1976-1981
Lab Aide I	$6,145	$9,193	49.6
Lab Aide II	7,034	10,064	43.1
Lab Technician I	7,762	11,540	48.7
Lab Technician II	8,940	13,139	47.0
Microbiologist I	10,631	14,979	40.9
Microbiologist II	12,212	17,281	41.5
Microbiologist III	14,260	19,941	39.8
Microbiologist IV	16,868	22,690	34.5
Microbiologist V	18,827	25,296	34.4
Chemist I	10,807	15,070	39.5
Chemist II	12,479	17,830	42.9
Chemist III	14,395	20,526	42.6
Chemist IV	17,096	22,575	32.0
Chemist V	20,221	25,721	27.2
Asst. Lab Director	20,265	28,081	38.6
Lab Director	25,139	34,087	35.6

SALARIES OF ENGINEERS

- The 14th biennial survey by the *Engineering Manpower Commission* of *PROFESSIONAL INCOME OF ENGINEERS* provides data from 885 establishments covering 135,313 engineering graduates employed in industry, government and education. Although the median salaries of engineers increased 12% between 1978 and 1980, the average rate of inflation over the same period was 25.8%. The net result is a loss of more than 13% in purchasing power over the two-year period (Chart 8).

Engineers in supervisory positions enjoy higher earnings than non-supervisors. The largest salary differential is for petroleum engineers (53.2%) and the smallest is in state governments (15.5%) (Table 89).

Engineers employed in the chemicals and petroleum industries command the highest median salaries reflecting the high demand for both chemical and petroleum engineering graduates. Those engineers employed in state governments earn the least (Table 90), regardless of years since the baccalaureate (Tables 93 and 94).

Although engineering salaries increased 12% from 1978 to 1980, the rise was not uniform throughout the United States. Median increases ranged from 22.0% in the Pacific Region to only 3.4% in the New England Region. Engineers working in the Pacific region reported the highest median salaries ($33,000), while those working in the West North Central reported the lowest ($26,450) (Table 91). However, engineers working in the Mountain region earn the highest salaries for the first five years after receipt of the baccalaureate after which those employed in the Pacific region overtake them (Table 95).

As expected, those engineers with higher degrees earn higher salaries. Median salaries paid to experienced Ph.D.'s are 14.1% higher than those salaries paid to experienced master's degree holders. Master's degree engineers are paid 11.9% above those with bachelor's degrees. Ph.D. engineers also experienced the highest percentage increase in salaries from 1978 to 1980 - 15.2%, while those at the bachelor's level reported the smallest increase - 11.2%. Median annual salaries by degree level and selected years since the baccalaureate are shown in Table 92.

- The 1981 15th biennial survey by the *National Society of Professional Engineers* of its membership - *PROFESSIONAL ENGINEERS' INCOME AND SALARY SURVEY* - shows an 11.4% increase in the 15-month period since the 1979 survey, less than the 15.6% increase in the Consumer Price Index during the same period. The survey finds the median annual income of all participants was $35,500 annually.

As might be expected, graduate degrees resulted in higher earnings. Engineers holding doctorates had a median income of $41,500, while those with only a baccalaureate had a median income of $34,884 (Table 96). Professional engineers with the doctorate were earning 19.0% more in 1981 than those with a B.S., while the similar figure in 1979 was 20.7%. Regardless of degree level, median income increases with increased engineering experience as is shown in Table 97.

When median income is analyzed by branch of engineering, those in petroleum and mining engineering did significantly better than those in other branches with a median income of $44,550. However, agricultural engineers experienced the largest income increase from 1979 to 1981 - 22% - while aeronautical and aerospace received the smallest increase - 8% (Table 98). Median income of engineers by branch of engineering and length of experience is shown in Table 99.

Engineers in executive and administrative positions were the highest-paid with a median annual income of $42,000, while those engineers in construction supervision were the lowest paid at $31,500 (Table 101). Executive/Administrative work continues to be the highest paid job function regardless of years of experience (Table 100).

Engineers employed in construction and real estate development reported the highest median income - $40,000, followed by those employed in the area of petroleum and coal products at $39,600. The lowest median incomes were received by engineers employed by state and local governments at $29,875 and $30,500 respectively (Table 102).

Geographically, the highest median incomes were found in the Northeastern region ($37,500) while the lowest were in the Great Plains states ($33,600) (Table 103). By metropolitan area, the highest median incomes were in Houston, Texas ($42,000) followed by New York City and Los Angeles at $40,000 respectively. Among the 29 population centers surveyed, the lowest median income was found in Memphis, Tennessee ($31,450) followed by Columbus, Ohio ($33,000) (Table 104).

• The 15th semi-annual Spring 1981 survey by *D. Dietrich Associates, Inc.* reports data from 393 firms plus the federal government and covers information on 129,000 engineers. The *SPRING 1981 ENGINEERING SALARY SURVEY* reports an average salary for all participants of $30,913 per year - an increase of 9.95% from salaries reported a year earlier. As expected, as level of responsibility increases (i.e. title), so does salary as shown in Table 105.

Engineers who are employed in the West reported the highest median salaries regardless of level of responsibility (Table 106). Overall, those engineers employed by research and development firms reported the highest base salaries - $32,772 - while those employed by utility firms reported the lowest - $29,811. However, by level of responsibility, R & D firms do not always pay the most nor do utility firms always pay the least (Table 107).

• Average compensation for industrial engineers on January 1, 1981 was $32,639, according to the sixth survey conducted by *Abbott, Langer and Associates* for the *American Institute of Industrial Engineers*. Those with less than a bachelor's degree reported annual compensation of $26,095, while those with a doctorate had a median income of $36,000 (Table 108).

Median income of industrial engineers varied considerably from one type of employer to another. In general, median incomes in non-manufacturing organizations were considerably higher ($32,100) than in manufacturing firms ($28,600). The lowest median income of AIIE members was found in firms manufacturing furniture and wood products ($26,350) and apparel & other textile products ($27,038), while the highest was found in non-engineering consulting firms ($39,975) and engineering consulting firms ($37,500) (Table 109).

An analysis of data by metropolitan area finds that median income was again highest in Washington/Baltimore & vicinities ($35,140), followed by the San Francisco/Oakland area ($33,644). The lowest median incomes were found outside of metropolitan centers (Table 110).

Total income of industrial engineers rose regularly by length of experience, with a median income of $21,278 for those with under one year of experience and $38,400 for those with 30 or more years of experience. This provides a "spread" of 80.5% between the two groups (Table 111).

• In another survey by *Abbott, Langer & Associates* on *COMPENSATION IN MANUFACTURING (ENGINEERS AND MANAGERS)*, prepared for the *Society of Manufacturing Engineers*, engineers reported a median annual income of $25,000 - up 17.4% since 1978 and managerial personnel in manufacturing reported a median income of $33,600.

Level of education had a slightly greater effect upon the income of managers than on the income of engineers. Income ranged from the $23,225 median earned by engineers who held an engineering technician (two-year) degree to the $28,080 earned by those who held a graduate degree - a difference of 20.9%. The income of managers ranged from $30,000 for those with no college training to $36,866 for those who hold a graduate degree - a difference of 22.9% (Tables 112 and 113).

Engineers in manufacturing received the highest median incomes when employed by the manufacturers of chemical, pharmaceutical, plastic and rubber products ($26,820). The lowest-paying employers were manufacturers of fabricated metal products ($23,065). The same employers also paid managers the highest and lowest (Table 114).

The median income for engineering personnel rose from $20,700 for those with less than five years of experience to $27,683 for those with 30 years or more, a variance of 33.7% (Table 115).

Income varied significantly by geographic area - as much as 26.7% for engineers. Median incomes were highest for engineers in the San Francisco/Oakland area, $29,268 followed by Detroit ($27,550) and lowest in the metropolitan areas of the southern states ($23,092) and the northeastern states ($23,760) (Table 116).

Among engineering personnel, the highest median income ($26,300) went to those whose training was in electrical engineering while the lowest compensation was reported by those who had not attend a college or technical institute ($23,563) (Table 117).

• The average annual income of engineers who are members of the *Institute of Electrical and Electronics Engineers* was $36,659 in 1980, according to another survey by *Abbott, Langer & Associates* for the *IEEE*. As in the other surveys, level of education played a significant part in total compensation. Median income ranged from $32,500 for those IEEE engineers with a B.S. degree to $40,000 for those with a doctorate (Table 118).

No significant difference in income was found between IEEE engineers employed in their area of primary technical competence (Table 119) and those working outside that area but not interested in a job change. However, those not working in their area of primary technical competence but available for a job change had a median income $5,000 below that of the other two groups.

Income showed a consistent rise with increased engineering experience. Median income rose from $21,786 for those with under two years of experience to $40,800 for those with 30 years or more of experience - an average annual increase of about 3% (Table 120).

Electrical engineers employed by instrument manufacturers enjoyed the highest median income ($37,800), followed by those employed by communications services and manufacturers of telephone and telegraph apparatus (both $37,000). Those receiving the lowest incomes were employed by educational services ($30,000) and manufacturers of measuring and controlling instruments ($31,425) (Table 121).

By geographic area, those EE's working in New York City & vicinity had the highest median income ($39,300) while those working in the midwest (excluding Chicago/ Milwaukee & vicinity) had the lowest median income ($31,000) as shown in Table 122.

Annual income varies considerably on the basis of job function with the highest medians reported by those engineers in general and corporate management ($48,000) and the lowest by engineers employed in education ($30,000) (Table 123).

• The *Washington Section* of the *Institute of Electrical and Electronics Engineers* collected data from 23 employers representing over 6,000 engineering/scientific employees in private industry and the government in the Washington, D. C. area. The weighted annual salaries of D.C. area engineers/scientists by grade level and corresponding GS levels are shown in Table 124.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineering Manpower Bulletin, No. 56, December 1980.

Chart 8

TRENDS IN SELECTED MEDIAN SALARIES OF ENGINEERS, 1956-1980

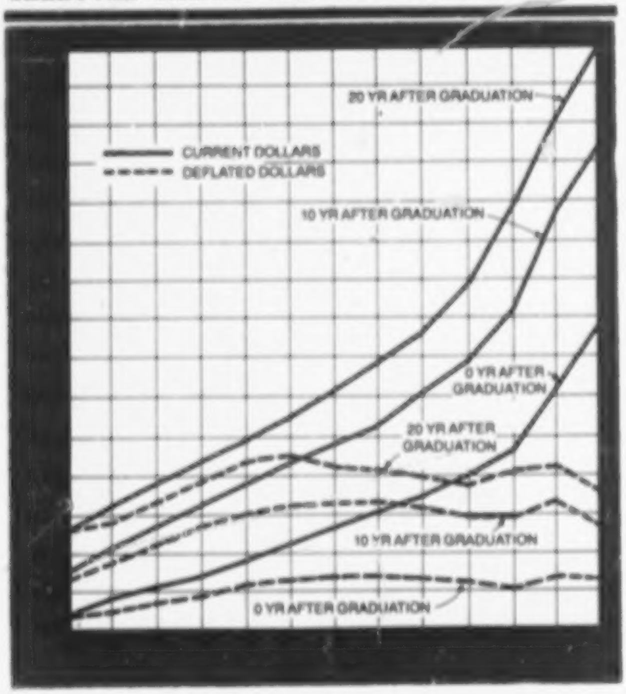


Table 89

MEDIAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SUPERVISORY STATUS, 1980

EMPLOYMENT GROUP	Supervisor	Non-Supervisor	Percent Differential
Research and Development	$39,350	$26,800	46.8
Petroleum	45,650	29,800	53.2
Aerospace	41,600	29,800	39.6
Chemicals	39,500	30,900	27.8
Electrical & Electronic Industry	38,750	28,150	37.7
Local Government	31,950	23,400	36.5
State Government	26,400	22,850	15.5
Federal Government	36,200	27,450	31.9
Construction and Mining	39,050	27,350	42.8
Utilities and Services	35,500	25,350	40.0
Design, Consulting & Engineering Services	38,750	26,700	45.1
Mechanical Industry	34,400	24,550	40.1
Metals Industries	33,700	23,800	41.6

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineering Manpower Bulletin, No. 43, March 1979 and No. 56, December 1980.

Table 90

MEDIAN AND MEAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP, 1978 AND 1980

EMPLOYMENT GROUP	MEDIAN		MEAN	
	1978	1980	1978	1980
Research and Development	$28,750	$28,850	$29,350	$30,450
Petroleum	29,550	33,650	30,250	35,350
Aerospace	28,400	31,950	28,450	32,450
Chemicals	27,950	33,750	28,750	34,500
Electrical & Electronic Industry	28,150	30,400	28,800	30,950
Local Government	24,500	25,250	25,500	27,150
State Government	20,850	24,700	21,150	24,600
Federal Government	29,800	29,650	29,450	29,450
Construction and Mining	25,250	30,100	26,050	31,150
Utilities and Services	24,250	28,550	25,600	30,200
Design, Consulting & Engineering Services	24,150	29,050	25,250	30,250
Mechanical Industry	23,850	26,950	24,900	28,750
All Education*	22,100	25,200	23,300	26,650
Metals Industries	23,500	26,800	24,450	28,350

*Includes 9-10 month and 12-month contracts

Table 91

MEDIAN AND MEAN SALARIES OF ENGINEERS* BY GEOGRAPHICAL REGION, 1978 AND 1980

GEOGRAPHICAL REGION	MEDIAN		MEAN	
	1978	1980	1978	1980
Pacific	$27,050	$33,000	$27,500	$33,650
Middle Atlantic	26,500	30,450	27,550	31,850
Mountain	25,400	29,600	26,100	30,900
New England	26,400	27,300	26,650	28,400
East North Central	24,450	28,100	25,550	29,500
West North Central	24,050	26,450	24,800	27,800
South Central	25,600	28,100	26,800	29,250
South Atlantic	26,400	28,050	27,100	29,300

*Includes only engineers employed in industry or government

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Professional Income of Engineers, 1980.

Table 92

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY HIGHEST DEGREE AND SELECTED YEARS SINCE BACCALAUREATE, 1978 (WEIGHTED NATIONAL AVERAGE)

HIGHEST DEGREE	YEARS SINCE BACCALAUREATE							
	1	5	7	9-11	15-17	21-23	27-29	35+
B. S.	(11,313) $20,400	(9,028) $23,800	(7,533) $25,450	(20,825) $27,750	(16,138) $31,350	(14,721) $33,400	(17,772) $34,250	(14,214) $34,450
M. S.	(1,373) $21,600	(2,735) $25,300	(2,757) $27,150	(8,493) $29,750	(6,883) $34,100	(4,322) $36,650	(4,020) $37,650	(2,800) $37,600
Ph.D.	(0) $ 0	(362) $29,100	(511) $30,400	(1,910) $32,400	(2,418) $36,350	(1,242) $39,800	(698) $42,250	(764) $42,550
All Levels	(12,688) $20,500	(12,149) $24,250	(10,830) $26,050	(31,313) $28,600	(25,509) $32,450	(20,341) $34,550	(22,536) $35,200	(17,854) $35,100

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, 1980 Engineers' Salaries.

Table 93

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF INDUSTRY AND SELECTED YEARS SINCE BACCALAUREATE, 1980

TYPE OF INDUSTRY	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Aerospace	(427) $19,500	(392) $20,500	(324) $24,700	(301) $26,800	(1,049) $29,700	(1,155) $34,200	(1,361) $35,500	(1,242) $36,200	(1,354) $36,200	(722) $34,800
Chemicals	(618) 21,000	(499) 22,000	(523) 26,150	(408) 28,250	(1,190) 31,250	(1,167) 36,250	(888) 38,000	(861) 39,250	(1,464) 40,550	(1,167) 40,700
Construction	(113) 19,050	(75) 20,100	(98) 24,350	(96) 26,300	(246) 28,900	(228) 32,550	(169) 33,650	(115) 34,350	(121) 35,150	(193) 35,450
Electrical Equipment	(68) 19,650	(35) 20,400	(29) 23,300	(42) 24,750	(110) 26,750	(84) 30,000	(88) 31,050	(69) 31,700	(78) 32,050	(81) 30,900
Electronic Equipment	(865) 19,400	(912) 20,400	(712) 24,300	(658) 26,250	(2,529) 28,950	(2,172) 33,050	(2,139) 34,350	(1,754) 35,150	(1,657) 35,750	(1,018) 35,450
Instruments	(186) 20,650	(115) 21,500	(103) 24,750	(92) 26,250	(205) 28,350	(138) 31,350	(152) 32,200	(101) 32,650	(111) 32,800	(59) 32,050
Machinery	(211) 20,450	(226) 21,150	(185) 24,100	(172) 25,600	(381) 27,800	(365) 31,850	(314) 33,400	(289) 34,600	(301) 35,600	(358) 33,850
Mechanical	(714) 19,900	(589) 20,600	(537) 23,500	(457) 24,900	(1,114) 27,050	(867) 30,750	(830) 32,150	(701) 33,150	(769) 33,950	(726) 32,600
Metals, Basic	(6) 20,700	(5) 21,500	(11) 24,750	(17) 26,500	(56) 29,250	(56) 34,700	(45) 37,050	(35) 38,800	(49) 39,900	(80) 33,550
Metal Products Fabricated	(317) 19,300	(245) 19,950	(243) 22,800	(189) 24,200	(497) 26,300	(337) 29,950	(347) 31,300	(294) 32,300	(342) 33,000	(270) 31,600
Mining	(18) 22,300	(14) 23,850	(18) 29,950	(12) 32,650	(28) 36,050	(31) 40,550	(22) 41,850	(20) 42,700	(25) 43,550	(18) 43,850
Paper & Wood	(90) 21,000	(73) 21,800	(47) 25,300	(43) 27,050	(114) 29,650	(111) 34,350	(103) 36,200	(111) 37,600	(134) 39,150	(115) 39,050
Petroleum	(553) 22,700	(527) 23,850	(503) 28,750	(305) 31,250	(1,006) 34,900	(568) 41,000	(506) 43,050	(442) 44,450	(745) 45,450	(502) 44,700
Food	(18) 20,500	(45) 21,250	(45) 24,250	(37) 25,900	(85) 28,350	(72) 33,100	(69) 35,000	(67) 36,400	(65) 37,050	(55) 31,250
Design, Consult & Engineering Services	(431) 18,650	(490) 19,850	(589) 24,450	(495) 26,500	(1,366) 29,200	(959) 32,800	(799) 33,850	(629) 34,600	(671) 35,350	(777) 35,650
Electric Utilities	(700) 19,450	(723) 20,350	(772) 24,050	(865) 25,850	(2,010) 28,450	(1,023) 32,700	(894) 34,250	(759) 35,450	(1,002) 36,900	(719) 37,750
Gas Utilities	(80) 20,500	(67) 21,450	(67) 25,550	(58) 27,550	(191) 30,400	(97) 34,950	(100) 36,550	(85) 37,650	(161) 38,700	(123) 38,900
Communications Services	(27) 18,400	(18) 19,300	(19) 22,900	(17) 24,550	(58) 26,800	(45) 30,300	(40) 31,550	(26) 32,450	(35) 33,550	(22) 34,050

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, 1980 Engineers' Salaries and 1980 Professional Income of Engineers.

Table 94

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SELECTED YEARS SINCE BACCALAUREATE, 1980

TYPE OF EMPLOYMENT	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Industry	(4,855) $19,800	(4,675) $20,800	(4,341) $24,750	(4,034) $26,650	(11,478) $29,400	(9,342) $33,750	(8,711) $35,150	(7,645) $36,150	(8,835) $37,000	(6,765) $37,000
All Manufacturing Industries	(2,997) 20,250	(2,605) 21,200	(2,260) 25,050	(1,916) 26,950	(5,913) 29,650	(5,244) 33,900	(4,931) 35,350	(4,562) 36,300	(5,450) 37,100	(3,953) 36,850
All Non-Mfg. Industries	(1,749) 19,350	(1,914) 20,350	(1,958) 24,450	(1,992) 26,450	(5,288) 29,250	(3,889) 33,650	(3,560) 35,100	(2,918) 36,050	(3,145) 36,900	(2,602) 37,000
Federal Government	(144) 19,750	(232) 20,600	(435) 24,000	(324) 25,550	(1,336) 27,700	(855) 30,950	(638) 32,100	(566) 32,950	(620) 34,050	(359) 34,550
State Government	(77) 15,800	(78) 16,500	(91) 19,300	(85) 20,700	(316) 22,700	(292) 25,800	(374) 26,750	(390) 27,300	(320) 27,350	(230) 26,100
Local Government	(36) 16,650	(15) 17,800	(24) 21,800	(20) 23,400	(107) 25,350	(84) 27,700	(75) 28,300	(87) 28,700	(107) 29,050	(94) 29,150
All Education All Faculty*	(3) 0	(4) 0	(94) 18,650	(138) 19,550	(684) 20,950	(931) 23,800	(977) 25,100	(948) 26,300	(743) 28,100	(1,137) 28,300
All Education All Administrators **	(0) 0	(0) 0	(0) 0	(0) 0	(12) 26,150	(60) 33,550	(99) 36,000	(99) 37,750	(96) 39,600	(116) 40,250
All Education All Researchers **	(0) 0	(0) 0	(21) 17,350	(19) 18,550	(56) 20,350	(49) 23,450	(42) 24,650	(35) 25,500	(21) 26,250	(47) 25,550
Research and Development	(317) 20,100	(339) 21,050	(268) 25,100	(231) 27,050	(702) 29,700	(441) 33,600	(372) 34,750	(320) 35,450	(352) 35,750	(318) 35,250
Consulting	(402) 18,550	(441) 19,800	(528) 24,500	(460) 26,600	(1,220) 29,350	(885) 33,000	(700) 34,050	(557) 34,750	(517) 35,500	(691) 35,800

* 9-month contract. ** 12-month contract.

Table 95

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE BACCALAUREATE, 1980*

GEOGRAPHIC AREA	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
New England	(361) $19,200	(351) $20,100	(304) $23,900	(270) $25,650	(662) $28,050	(561) $31,300	(536) $32,050	(451) $32,350	(594) $32,000	(427) $30,750
Middle Atlantic	(942) 19,450	(1,016) 20,500	(971) 24,900	(922) 27,000	(2,731) 29,950	(2,166) 34,350	(2,080) 35,650	(1,665) 36,450	(1,710) 37,000	(1,631) 36,850
East North Central	(1,137 19,650	(1,011) 20,500	(953) 23,900	(854) 25,600	(2,355) 27,900	(1,693) 31,600	(1,471) 32,850	(1,329) 33,700	(1,573) 34,450	(1,375) 34,450
West North Central	(420) 19,300	(314) 20,100	(310) 23,150	(272) 24,550	(683) 26,500	(552) 29,500	(532) 30,550	(420) 31,350	(390) 32,350	(230) 32,900
South Atlantic	(387) 19,250	(465) 20,100	(360) 23,700	(393) 25,500	(1,137) 28,050	(780) 32,200	(733) 33,600	(532) 34,500	(633) 35,050	(390) 34,250
South Central	(529) 19,900	(570) 20,750	(525) 24,050	(478) 25,600	(1,377) 27,650	(869) 30,800	(934) 31,900	(869) 32,750	(890) 33,800	(680) 34,350
Mountain	(181) 20,700	(156) 21,600	(141) 25,350	(135) 27,150	(376) 29,650	(364) 33,450	(343) 34,500	(330) 35,000	(295) 34,700	(170) 32,700
Pacific Coast	(294) 20,300	(326) 21,250	(427) 25,300	(413) 27,350	(1,236) 30,250	(1,300) 35,050	(1,392) 36,750	(1,200) 37,950	(1,170) 39,100	(692) 39,200

* Includes only engineers employed in industry and in government

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1981.

Table 96

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION, 1977-81

LEVEL OF EDUCATION	MEDIAN INCOME			PERCENT INCREASE	
	1977	1979	1981	1977-79	1979-81
Less than Bachelor's	$26,220	$31,000	$35,000	18%	13%
Bachelor's Degree	26,260	36,000	40,000	37	11
B. S. Degree (non-engineering)		31,787	36,150		14
B. S. Degree (engineering)		31,000	34,884		13
MA/MS Degree (not MBA or engineering)		33,000	37,000		12
MBA Degree		33,400	38,500		15
M. S. Degree in engineering	27,280	32,000	36,000	17	13
Doctorate	31,920	37,404	41,500	17	11

Table 97

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION AND LENGTH OF EXPERIENCE, 1981

LENGTH OF EXPERIENCE	Less than Bachelor's Degree	B.S. in Engineering	M.S. in Engineering	Doctorate
Under 1 Yr.	$	$21,600	$23,230	$
1 Yr.		21,132	24,400	
2 Yrs.		22,200	22,990	28,425
3 Yrs.		23,523	25,500	
4 Yrs.	22,950	24,900	26,903	
5-9 Yrs.	26,050	28,232	29,800	30,675
10-14 Yrs.	30,860	33,000	35,000	37,500
15-19 Yrs.	34,972	36,823	39,000	40,000
20-24 Yrs.	33,119	39,000	41,000	43,656
25-29 Yrs.	36,920	41,000	41,715	45,000
30 Yrs. or More	36,500	43,742	44,352	46,000

Table 98

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING, 1977-1981

BRANCH OF ENGINEERING	MEDIAN INCOME			PERCENT INCREASE	
	1977	1979	1981	1977-79	1979-81
Aeronautical and Aerospace	$28,220	$33,834	$36,400	20%	8%
Agricultural	25,900	28,163	34,469	9	22
Chemical	29,340	35,000	39,150	19	12
Civil (general)	26,270	30,160	33,682	15	12
Electrical & Electronic	26,280	31,512	36,000	20	14
Industrial	26,440	32,000	35,660	21	11
Mechanical	26,930	32,000	36,566	19	14
Sanitary, Environmental & Pollution Control	25,400	30,500	33,389	20	9
Metallurgical & Materials	27,380	30,000	35,000	10	17
Nuclear		34,208	38,000		11
Petroleum & Mining	29,400	38,000	44,550	29	17

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1981.

Table 99

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING AND LENGTH OF EXPERIENCE, 1981

BRANCH OF ENGINEERING	Under 1 Yr.	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5-9 Yrs.	10-14 Yrs.	15-19 Yrs.	20-24 Yrs.	25-29 Yrs.	30 Yrs. or More
Aeronautical & Aerospace	$	$	$	$23,500	$	$29,000	$32,500	$36,000	$39,524	$37,050	$41,900
Agriculture		23,168		24,480		27,618	33,769	33,400	36,700	43,645	42,060
Architectural						25,200	36,700	36,250	35,500	41,000	49,056
Chemical	23,400	23,623	24,504	26,238	26,903	32,000	39,358	40,710	42,500	48,000	48,600
Civil (General)	20,000	19,748	20,278	22,000	23,550	27,600	32,000	35,500	38,108	40,370	41,193
Civil (Primarily Structural)	21,500	20,400	21,211	23,288	23,051	27,997	32,000	33,394	40,000	41,000	41,680
Civil (Primarily Surveying)				19,200	22,536	24,188	27,000	33,772	31,970	34,380	34,500
Cost/Value					27,778	30,000	38,300	40,075	44,000	39,250	42,685
Electrical & Electronic	21,800	22,400	23,550	24,950	26,650	29,899	34,200	36,971	39,000	40,000	42,960
Industrial		22,028	23,672	22,000	26,919	30,000	33,440	37,400	40,175	44,750	42,500
Manufacturing			22,720	23,843	26,160	30,000	36,460	36,000	41,500	44,339	42,300
Mechanical	22,190	22,385	24,000	24,000	25,700	29,400	34,950	39,000	40,000	40,850	44,500
Metallurgical & Materials						31,728	34,850	38,000	38,478	35,000	43,916
Nuclear				26,540	28,524	30,000	37,500	41,740	39,850	49,900	45,000
Petroleum & Mining	27,480	27,990	27,488	29,675	28,875	36,000	45,000	49,220	56,043	50,000	55,200
Safety						25,200	31,280	36,126	40,546	36,000	31,000
Sanitary	22,000	20,100	21,865	20,800	23,907	27,825	34,089	38,700	42,000	47,896	44,350

Table 100

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY JOB FUNCTION AND LENGTH OF EXPERIENCE, 1981

LENGTH OF EXPERIENCE	Construction /Supervision	Consulting	Design	Executive/ Administrative	Production, Quality Control, Maintenance	Research and Development	Sales/ Marketing	Teaching/ Training
Under 1 Yr.	$20,500	$21,150	$21,230	$26,880	$22,440	$23,488	$	$
1 Yr.	20,535	20,900	21,475	21,553	22,495	21,000		
2 Yrs.	22,140	21,550	22,144	23,300	24,000	23,280	22,280	21,290
3 Yrs.	23,950	22,725	22,620	27,660	24,385	25,000	25,300	
4 Yrs.	24,236	25,000	24,000	28,580	26,160	26,986	26,880	
5-9 Yrs.	28,192	29,000	27,800	31,195	29,276	29,328	30,500	27,630
10-14 Yrs.	32,100	35,000	31,800	36,000	32,703	34,031	36,750	30,000
15-19 Yrs.	35,158	40,250	33,461	40,029	35,000	37,500	39,500	31,532
20-24 Yrs.	35,800	42,050	35,024	43,000	35,033	39,000	39,300	31,000
25-29 Yrs.	36,250	45,000	36,722	45,000	37,000	38,396	42,300	34,488
30 Yrs. or More	37,204	45,000	36,248	49,883	36,654	40,083	44,500	37,450

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1981.

Table 101

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY JOB FUNCTION, 1977-81

JOB FUNCTION	MEDIAN INCOME			PERCENT INCREASE	
	1977	1979	1981	1977-79	1979-81
Executive-Administrative	$31,860	$38,186	$42,000	20%	10%
Sales/Marketing	28,040	33,500	37,950	19	13
Teaching/Training	26,300	30,000	33,333	14	11
Design	22,370	26,750	30,374	20	14
Production, Quality Control, Maintenance, etc.	22,830	27,300	31,800	20	16
Research and Development	26,310	31,500	35,000	20	11
Construction Supervision	24,140	28,400	31,500	18	11
Consulting	27,910	33,000	37,000	18	12

Table 102

NUMBER REPORTED, MEAN AND MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY INDUSTRY OR SERVICE OF EMPLOYER, 1981

INDUSTRY OR SERVICE OF EMPLOYER	Total Employees Reported	Median	Mean
Aerospace & Aircraft Products	362	$35,000	$36,714
Chemical, Pharmaceutical & Allied Products	550	38,603	45,228
Electrical & Electronic Equipment	713	36,000	40,624
Fabricated Metal Products	527	36,000	41,826
Food, Beverage & Tobacco Products	178	35,000	39,880
Machinery (except electrical)	362	36,841	44,370
Petroleum & Coal Products	573	39,600	49,761
Primary Metal Industries	214	36,580	40,459
Rubber & Plastic Products	125	33,000	39,317
Stone, Clay & Glass and Concrete Products	189	36,500	42,697
Transportation Equipment	259	33,978	37,037
All Manufacturing/Extractive	4,655	36,050	42,339
Colleges & Universities	651	36,246	37,690
Communication Services	333	36,400	40,171
Construction & Real Estate Development	1,006	40,000	49,010
Consultants (engineering or architectural)	5,385	37,000	44,431
Engineering Services	738	38,000	47,021
Government-Federal	955	35,365	37,074
Government-State	765	29,875	30,062
Government-Local	1,080	30,500	32,035
Research Organizations & Laboratories	219	35,600	40,460
Transportation Services	124	37,363	43,141
Utilities-Electric	1,132	34,000	36,600
Utilities-Gas	160	34,976	39,786
Utilities-Pipelines	108	36,808	42,544
Utilities-Other or Mixed	263	35,900	41,410
All Non-Manufacturing/Extractive	13,250	35,100	41,299

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1981.

Table 103

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY REGION, 1977-81

REGION	MEDIAN INCOME			PERCENT INCREASE	
	1977	1979	1981	1977-79	1979-81
Northeastern States	$28,350	$33,000	$37,500	16%	14%
Southern States*	26,530	31,489	34,700	19	10
Great Lakes States	26,160	30,872	34,080	18	10
Great Plains States	24,730	30,000	33,600	21	12
Southwestern States	26,710	32,000	36,400	20	14
Pacific & Western States**	27,520	32,456	37,033	18	14

* Includes Puerto Rico and Panama. ** Includes Alaska, Hawaii, and Guam.

Table 104

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF PROFESSIONAL ENGINEERS BY METROPOLITAN AREA, 1981

METROPOLITAN AREA	Number Reported	Median	Mean
Atlanta (GA) & Vicinity	305	$37,000	$42,349
Baltimore (MD) & Vicinity	140	36,898	40,308
Boston (MA) & Vicinity	342	38,391	43,495
Chicago (IL) & Vicinity	768	35,100	42,981
Cleveland (OH) & Vicinity	274	33,386	40,872
Columbus (OH) & Vicinity	251	33,000	38,794
Dallas/Ft. Worth (TX) & Vicinity	470	37,000	45,921
Denver/Colorado Springs (CO) & Vicinity	293	36,120	42,103
Detroit (MI) & Vicinity	358	39,612	47,160
Houston (TX) & Vicinity	635	42,000	50,769
Indianapolis (IN) & Vicinity	164	35,200	39,187
Jacksonville (FL) & Vicinity	119	36,000	45,048
Kansas City (MO/KS) & Vicinity	420	34,420	40,105
Los Angeles/Long Beach/San Diego	374	40,000	47,647
Memphis (TN) & Vicinity	86	31,450	38,001
Milwaukee (WI) & Vicinity	200	36,000	43,445
Minneapolis/St. Paul (MN) & Vicinity	278	37,100	42,210
Naussau/Suffolk Counties (NY) & Vicinity	129	39,000	44,222
Newark/Jersey City (NJ) & Vicinity	313	39,300	43,798
New Orleans (LA) & Vicinity	235	36,000	43,844
New York City (NY)	458	40,500	48,835
Philadelphia (PA/NJ) & Vicinity	456	37,150	43,959
Phoenix (AZ) & Vicinity	121	36,300	40,295
Pittsburgh (PA) & Vicinity	303	36,500	43,125
St. Louis (MO) & Vicinity	314	35,326	44,609
San Antonio (TX) & Vicinity	158	33,300	42,039
San Francisco/Oakland (CA) & Vicinity	308	39,252	46,454
Seattle (WA) & Vicinity	162	36,250	42,891
Washington (DC/MD/VA) & Vicinity	487	39,672	43,583

SOURCE: D. Dietrich Associates, Inc. Engineering Salaries Survey, Spring 1981, April 1981.

Table 105

NUMBER, WEIGHTED AVERAGE AND MEDIAN SALARIES OF ENGINEERS BY TITLE*, 1981

TITLE*	Number of Employees	Weighted Average Base Salary	Actual Median Salaries
Engineer I	5,431	$21,277	$19,800
Engineer II	6,097	23,180	21,900
Engineer III	7,812	26,386	24,400
Engineer IV	10,275	29,643	27,600
Engineer V	8,413	33,921	31,000
Engineer VI	6,996	37,119	35,000
Engineer VII	3,036	41,969	39,500
Engineer VIII	1,614	46,522	44,000
Engineer, Dept. Head	870	54,421	51,500

* See original survey for definition of Title by level of responsibility.

Table 106

WEIGHTED AVERAGE AND MEDIAN SALARIES OF ENGINEERS BY GEOGRAPHIC AREA AND TITLE*, 1981

TITLE*	WEST		NORTHEAST		SOUTH		MIDWEST/CENTRAL	
	Weighted Average	Median	Weighted Average	Median	Weighted Average	Median	Weighted Average	Median
Engineer I	$22,104 (21,406)	$19,850	$18,856	$18,075	$19,661	$18,888	$19,944	$18,400
Engineer II	22,567	21,360	21,241	19,610	21,671	20,238	22,196	20,400
Engineer III	25,676 (24,108)	23,844	23,894	23,046	25,240 (23,823)	22,750	24,308 (23,443)	22,340
Engineer IV	28,533 (27,166)	27,180	27,757	25,750	29,874	27,000	27,818 (26,969)	25,500
Engineer V	32,464 (31,840)	30.804	32,425 (31,003)	30,833	33,360 (30,866)	31,333	31,954 (30,956)	28,780
Engineer VI	39,421 (37,938)	36,000	35,330 (33,811)	33,000	37,137 (34,279)	34,850	34,987 (34,239)	33,500
Engineer VII	43,579 (42,817)	41,400	39,917	38,940	42,521 (37,066)	39,600	39,994 (38,636)	36,000
Engineer VIII	51,089 (49,284)	47,990	45,346	45,816	43,258	44,000	42,209	43,068
Engineer, Dept. Head	59,338 (56,606)	54,000	56,644 (54,146)	53,941	58,809 (53,987)	54,000	49,769	49,920

NOTE: Figure in parentheses adjusted to exclude one firm's data.

*** See original survey for definitions by level of responsibility.**

SOURCE: D. Dietrich Associates, Inc., Engineering Salaries Survey, Spring 1981, April 1981.

Table 107

NUMBER AND BASE AVERAGE SALARY OF ENGINEERS BY TYPE OF EMPLOYER AND TITLE*, 1981

TITLE*	DESIGN/ CONSULTING		DESIGN/ CONSTRUCTION		INDUSTRY		UTILITY		GOVERNMENT (Excludes Federal)		RESEARCH & DEVELOPMENT		ALL FIRMS (Less Gov't)
	No. of Empl.	Base Salary	No. of Empl.	Base Salary	No. of Empl.	Base Salary	No. of Empl.	Base Salary	No. of Empl.	Base Salary	No. of Empl.	Base Salary	Base Salary
Engineer I	1,008	$20,090	1,958	$21,053	1,062	$21,687	1,185	$21,796	157	$18,236	218	$23,959	$21,277
Engineer II	1,749	22,031	1,791	23,974	990	23,507	1,375	23,341	562	23,227	192	23,412	23,180
Engineer III	2,289	24,644	2,222	27,127	1,633	27,109	1,284	27,014	412	25,519	384	27,308	26,386
Engineer IV	2,532	28,161	2,447	31,175	1,480	30,060	3,328	29,351	458	29,614	488	30,369	29,643
Engineer V	2,563	32,373	2,484	35,049	1,392	32,756	1,231	34,596	163	33,694	743	36,552	33,921
Engineer VI	2,239	36,466	1,552	39,847	944	40,309	2,029	34,201	229	37,139	232	37,717	37,119
Engineer VII	1,263	41,282	809	43,575	455	41,582	345	41,427	107	39,405	164	41,559	41,969
Engineer VIII	785	45,490	390	47.999	228	46,388	146	48,756	42	46,400	65	45,579	46,522
Engineer, Dept. Head	477	55,033	154	55,546	113	52,563	79	54,438	33	42,260 (46,298)†	47	48,968	54,421
TOTALS	14,905	31,212	13,807	31,299	8,297	30,630	11,002	29,811	2,163	28,456	2,533	32,772	30,913

* See original survey for definitions by level of responsibility.

† Figure in parentheses adjusted to exclude one firm's data.

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, Sixth Edition, April 1981.

Table 108

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY DEGREE LEVEL, JANUARY 1, 1981

DEGREE LEVEL	Total Employees	Median Income	Mean Income
Ph.D.	335	$36,000	$39,151
M.S., M.E. or M.A. Degree	1,208	32,133	35,495
MBA	859	33,500	37,081
Bachelor's (Engineering)	2,869	28,068	31,525
Bachelor's (Non-Engineering)	1,264	27,988	30,630
Less than Bachelor's Degree	737	26,095	27,850

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, Fourth Edition, April 1981.

Table 109

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY TYPE OF EMPLOYER, JANUARY 1, 1981

TYPE OF EMPLOYER	Total Employees	Median Income	Mean Income
MANUFACTURING ORGANIZATIONS			
Aerospace & Aircraft Products	371	$28,500	$30,490
Apparel & Other Textile Products	174	27,038	30,209
Chemical, Pharmaceutical & Allied Products	415	32,325	34,707
Electrical & Electronic Equipment	1,001	28,080	30,506
Fabricated Metal Products	688	27,150	29,569
Food & Kindred Products	313	30,500	34,159
Furniture & Wood Products	82	26,350	30,000
Instruments & Related Products	86	29,713	30,255
Machinery (Except Electrical)	231	28,302	31,423
Paper & Allied Products	145	27,400	30,327
Primary Metal Industries	327	32,000	35,393
Printing & Publishing	99	30,740	34,219
Rubber & Misc. Plastics Products	192	29,925	31,488
Stone, Clay & Glass Products	131	28,500	30,743
Textile Mill Products	100	28,675	34,267
Transportation Equipment	484	28,304	31,521
NON-MANUFACTURING ORGANIZATIONS			
Banks & Finance Organizations	84	$27,250	$30,467
Colleges & Universities	300	32,426	34,451
Communications Organizations	67	30,480	33,546
Consultants (Engineering)	178	37,500	43,041
Consultants (Non-Engineering)	145	39,975	46,292
Government-Federal	314	33,000	34,199
Government-State & Local	66	27,338	28,834
Merchandising (Wholesale & Retail)	100	31,200	35,353
Health Care Organizations	235	29,168	30,312
Transportation Services	148	33,000	35,628
Utilities-Electric	99	29,500	32,358
Utilities-Other or Combined	80	32,950	34,919

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, Sixth Edition, April 1981.

Table 110

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY METROPOLITAN AREA, JANUARY 1, 1981

METROPOLITAN AREA	Total Employees Reported	Median Income	Mean Income
Boston and Vicinity	178	$29,774	$32,273
New York City & Vicinity (NY/NJ/CT)	462	32,144	36,548
Philadelphia & Vicinity (PA/NJ)	247	29,500	32,784
Pittsburgh & Vicinity (PA/OH)	229	29,500	32,830
Northeastern States (excluding metropolitan areas above)	634	28,590	30,987
Atlanta and Vicinity	117	30,000	35,051
Washington, DC/Baltimore & Vicinity (DC/MD/VA)	206	35,140	37,446
Southeastern States (excluding metropolitan areas above)	1,323	27,736	30,513
Chicago and Vicinity (IL/IN)	428	30,500	35,091
Detroit and Vicinity	154	[illegible]3,000	35,804
Great Lake States (excluding metropolitan areas above)	1,026	28,082	31,176
North Central States (exclud. metropolitan areas above)	495	28,020	29,944
Dallas/Ft. Worth and vicinity	168	28,984	32,140
South Central States (exclud. metropolitan areas above)	358	30,114	33,342
Denver/Boulder/Colorado Springs/Pueblo & Vicinity	73	30,531	32,773
Mountain States (excluding metropolitan areas above)	187	30,500	32,246
Los Angeles/San Diego and Vicinity	420	32,500	35,796
San Francisco/Oakland and Vicinity	279	33,644	36,759
Pacific States (excluding metropolitan areas above)	181	27,600	30,433
St. Louis and Vicinity (MO/IL)	101	28,000	30,596

Table 111

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY YEARS OF EXPERIENCE, JANUARY 1, 1981

YEARS OF EXPERIENCE	Total Employees Reported	Median Income	Mean Income
Under One Year	142	$21,278	$22,120
One Year	179	21,500	22,093
Two Years	400	22,206	22,747
Three Years	369	23,400	23,558
Four Years	369	24,471	25,052
5 through 9 Years	1,679	27,075	28,212
10 through 14 Years	1,289	31,000	32,906
15 through 19 Years	897	34,300	36,498
20 through 24 Years	775	36,750	40,305
25 through 29 Years	645	35,980	39,682
30 Years and Over	554	38,400	44,066

SOURCE: Society of Manufacturing Engineers, Inc., *Compensation in Manufacturing (Engineers and Managers)*, Second Edition, 1980.

Table 112

NUMBER AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY EDUCATION LEVEL, 1980.

EDUCATION LEVEL	TOTAL EMPLOYEES	MEDIAN INCOME	MEAN INCOME
Graduate Degree	293	$28,080	$29,705
B.S. in Engineering	556	25,600	27,273
Other BA/BS Degree	289	24,000	24,610
Engineering Technician Degree	190	23,225	24,336
Some College (No Degree)	589	25,000	25,962
No College	167	23,851	25,076

Table 113

NUMBER AND TOTAL ANNUAL INCOME OF MANAGERS EMPLOYED IN MANUFACTURING BY EDUCATION LEVEL, 1980

EDUCATION LEVEL	TOTAL EMPLOYEES	MEDIAN INCOME	MEAN INCOME
Graduate Degree	472	$36,866	$41,279
B.S. in Engineering	814	36,000	41,929
Other BA/BS Degree	336	32,243	36,498
Engineering Technician Degree	187	30,200	33,578
Some College (no Degree)	877	32,100	37,887
No College	282	30,000	36,632

Table 114

NUMBER AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY TYPE OF EMPLOYER, 1980

TYPE OF EMPLOYER	TOTAL EMPLOYEES	MEDIAN INCOME	MEAN INCOME
Chemical, Pharmaceutical, Rubber & Plastic Products	28	$26,820	$29,019
Aerospace & Aircraft Products	274	26,100	26,667
Primary Metal Industries	57	26,000	26,700
Fabricated Metal Products	408	23,065	24,691
Machinery (Except Electrical)	229	25,000	27,135
Electrical and Electronic Equipment	337	25,400	26,139
Instruments, Controls & Related Products	75	23,450	24,541
Transportation Equipment	294	26,450	27,482
All Non-Manufacturing Employers	208	26,797	28,300
All Manufacturing/Extractive Employers	1,988	25,000	26,172

SOURCE: Society of Manufacturing Engineers, Inc., Compensation in Manufacturing, (Engineers and Managers), Second Edition, 1980.

Table 115

NUMBER AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY YEARS OF EXPERIENCE, 1980

YEARS OF EXPERIENCE	TOTAL EMPLOYEES	MEDIAN INCOME	MEAN INCOME
Under 5 Years	379	$20,700	$21,141
5-9 Years	349	23,233	24,151
10-14 Years	365	25,320	26,514
15-19 Years	278	26,673	27,895
20-24 Years	249	27,060	28,029
25-29 Years	255	27,880	30,042
30 Years and Over	306	27,633	29,678

Table 116

NUMBER AND TOTAL ANNUAL INCOME OF ENGINEERS EMPLOYED IN MANUFACTURING BY GEOGRAPHIC AREA, 1980

GEOGRAPHIC AREA	TOTAL EMPLOYEES	MEDIAN INCOME	MEAN INCOME
Boston (MA) & Vicinity	81	$26,000	$26,323
New York City (NY/NJ) & Vicinity	86	26,000	27,174
Philadelphia (PA/NJ) & Vicinity	54	25,650	25,871
Northeastern States (Excluding Metropolitan Areas Above)	279	23,760	25,443
Washington/Baltimore (DC/MD/VA) & Vicinity	44	25,750	27,870
Southern States (Excluding Metropolitan Area Above)	212	23,092	24,896
Chicago (IL/IN) & Vicinity	168	25,576	26,945
Cleveland (OH) & Vicinity	74	24,840	27,112
Detroit (MI) & Vicinity	154	27,550	29,156
Great Lakes States (Excluding Metropolitan Areas Above)	322	24,320	26,018
Dallas/Ft. Worth (TX) & Vicinity	35	23,800	27,047
Houston (TX) & Vicinity	43	26,130	25,771
Los Angeles/San Diego (CA) & Vicinity	186	26,200	27,131
San Francisco/Oakland (CA) & Vicinity	48	29,268	29,628
Central & Western States (Excluding Metropolitan Areas Above)	417	24,780	25,795

Table 117

NUMBER AND TOTAL ANNUAL INCOME OF ENGINEERS EMPLOYED IN MANUFACTURING BY TYPE OF TRAINING, 1980

COLLEGE/TECHNICAL INSTITUTE MAJOR	TOTAL EMPLOYEES	MEDIAN INCOME	MEAN INCOME
Electrical Engineering	96	$26,300	$27,630
Industrial Engineering	253	25,243	27,032
Manufacturing Engineering	264	24,000	25,321
Mechanical Engineering	731	25,896	27,457
Other Engineering Major	209	25,000	26,701
Some Field Other Than Engineering	397	24,250	25,076
Did Not Attend College/ Technical Institute	256	23,563	25,158

SOURCE: Institute of Electrical and Electronics Engineers, Inc, IEEE U. S. Membership Salary and Fringe Benefit Survey, 1981, June 1981.

Table 118

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY TYPE OF DEGREE, 1981

TYPE OF DEGREE	Total Employees	Median Income	Mean Income
Doctorate	649	$40,000	$42,655
MBA	139	35,500	38,162
MSEE	1,037	36,000	38,234
Master's (Not MSEE or MBA)	415	35,077	36,801
BS or BS - Engineering	2,147	32,500	34,542
BA	84	32,920	38,479
Less than BA/BS	101	35,000	36,395

Table 119

NUMBER AND TOTAL ANNUAL INCOME OF FULL-TIME EMPLOYED IEEE ENGINEERS BY AREA OF PRIMARY TECHNICAL COMPETENCE, 1981

PRIMARY TECHNICAL COMPETENCE	Number of Employees	Median Income	Mean Income
Acoustics, Speech & Signal Processing	81	$35,712	$37,051
Aerospace & Electronic Systems	432	36,794	37,633
Antennas & Propogation	68	36,100	37,986
Circuits & Systems	218	32,000	32,305
Communications	409	35,900	37,701
Components, Hybrids	65	35,900	42,959
Computers	736	31,500	34,196
Control Systems	144	32,000	33,653
Education	80	29,464	31,553
Electron Devices	120	37,529	40,974
Electro-Optical Systems	81	39,382	41,183
Engineering Management	450	42,500	45,330
Industrial Electronics & Control Instrumentation	155	32,000	34,502
Industry Applications	181	34,800	36,811
Instrumentation & Measurement	132	32,615	35,442
Microwave Theory & Techniques	71	35,000	35,605
Power Engineering	657	32,350	34,774

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1981, June 1981.

Table 120

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY YEARS OF EXPERIENCE, 1981

YEARS OF EXPERIENCE	Number of Respondents	Median Income	Mean Income
Under 2 Years	92	$21,786	$22,418
2-4 Years	514	24,607	25,260
5-9 Years	711	28,764	29,669
10-14 Years	757	34,063	35,625
15-19 Years	604	37,018	38,542
20-24 Years	652	39,510	42,199
25-29 Years	505	40,000	42,398
30 Years or More	832	40,800	44,174

Table 121

NUMBER AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY INDUSTRY OR SERVICE OF EMPLOYER, 1981

INDUSTRY OR SERVICE OF EMPLOYER	Number of Respondents	Median Income	Mean Income
Ordnance & Accessories	107	$35,714	$35,997
Petroleum & Related Products	54	35,300	40,578
Electronic Computing Equipment	437	34,000	36,715
Electronic Machinery, Equipment & Supplies	169	36,780	38,013
Electric Measuring Instruments & Test Equipment	65	36,000	41,271
Power, Distribution & Specialty Transformers	53	32,500	34,570
Telephone & Telegraph Apparatus	183	37,000	37,862
Aircraft	174	35,119	35,376
Manufacturers of Instruments - Professional, Scientific, Controlling, Photo & Optical Goods, Watches & Clocks	64	37,800	41,573
Engineering Lab, Scientific & Research Instruments, and Associated Equipment	113	36,000	36,710
Instruments - Measuring, Controlling & Indicating Physical Characteristics	129	31,425	35,217
Miscellaneous Manufacturing Industries	97	34,123	38,827
Communications Services	191	37,000	39,121
Telephone Services	57	34,500	36,717
Electrical Companies and Systems	423	33,000	35,528
Electrical & Other Services Combined	59	31,500	34,673
Computer & Data Processing Services	126	32,920	35,438
Educational Services	126	30,000	32,336
Consulting Engineers	296	35,960	38,800
Electronics Components & Accessories	229	35,077	39,279
Nonprofit Education & Research Agencies	171	35,000	35,307
Federal Government	435	34,500	35,073

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1981, June 1981.

Table 122

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY GEOGRAPHIC AREA, 1981

GEOGRAPHIC AREA	Total Employees	Median Income	Mean Income
Northeastern States (Excluding Boston, New York City & Vicinities)	433	$34,300	$36,028
Boston & Vicinity	253	37,100	38,837
New York City & Vicinity	314	39,300	41,512
Eastern States (Excluding Philadelphia, Washington/Baltimore & Vicinities	362	33,654	35,146
Philadelphia & Vicinity	154	34,300	36,666
Washington/Baltimore & Vicinity	352	36,323	37,789
Southeastern States (Excluding Florida)	363	33,400	35,211
Florida	153	32,000	33,455
Central States (Excluding Chicago/ Milwaukee & Vicinity	356	31,000	34,500
Chicago/Milwaukee & Vicinity	178	34,100	36,934
Southwestern States	543	31,500	34,584
Western States (Excluding Los Angeles, San Diego, San Francisco/Oakland & Vicinities	297	33,000	35,472
Los Angeles, San Diego & Vicinity	507	37,500	39,274
San Francisco/Oakland & Vicinity	360	37,262	39,801

Table 123

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY JOB FUNCTION, 1981

JOB FUNCTION	Total Employees	Median Income	Mean Income
Basic Research	165	$36,440	$37,853
Computer Applications (Programmers, Systems Analysts, Software Engineers)	438	32,000	32,987
Computer Systems/Operations	86	32,800	33,561
Consulting	223	37,400	40,718
Dean, Professor, Instructor, etc.	177	30,000	32,585
Design & Development Engineering	1,520	34,675	35,748
Engineering Services Evaluation (Quality Control, Reliability Standards, Tests)	234	31,950	32,996
Engineering Systems Planning & Design (Utilities)	438	32,940	34,578
General & Corporate Management	372	48,000	53,305
Manufacturing & Production	96	31,932	34,367
Marketing/Sales	128	38,200	40,116
Member of Technical Staff (MTS)	337	36,000	35,852
Operations, Construction & Maintenance (Utilities)	176	32,727	33,740

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE Washington, D.C. Section 1980 Salary and Fringe Benefits Survey, September 1980.

Table 124

NUMBER AND WEIGHTED AVERAGE SALARY OF ENGINEERS AND SCIENTISTS IN THE WASHINGTON, D. C. AREA BY GRADE LEVEL (G. S.), 1980

GRADE LEVEL*	(G.S.)	Private Industry		Federal Gov't.		Total	
		No.	Salary	No.	Salary	No.	Salary
1	5	113	$19,326	11	$15,573	124	$18,993
2	7	262	20,556	48	18,352	310	20,215
3	9	496	24,364	115	21,184	611	23,766
4	11	862	30,145	178	24,343	1,040	29,152
5	12	413	33,394	282	27,493	695	31,000
6	13	374	35,864	797	33,888	1,171	34,519
7	14	162	41,180	1,080	40,374	1,242	40,479
8	15	61	47,913	750	47,200	811	47,254
Total		2,743	30,054	3,261	37,285	6,004	33,982

* The eight grades reflect increasing levels of responsibility as defined in the U.S. Department of labor's survey of Professional, Administrative, Technical and clerical salaries.

SALARIES OF TECHNICIANS AND TECHNOLOGISTS

- Median salaries paid to engineering technicians increased 11.6% from 1977 to 1979, according to *SALARIES OF ENGINEERING TECHICIANS AND TECHNOLOGISTS, 1979*, conducted by the *Engineering Manpower Commission* of the *American Association of Engineering Societies*. Starting salaries for new graduates were most noticeably affected with small increases in salary. Those engineering technicians with 10 years of experience received an 18.0% increase in salary, while those with 20 years of experiece reported their salaries rose 15.9% and those with 30 years of experience rose 15.7% (Table 125). Similar figures are shown in Table 126 for engineering bachelor of technology graduates.

The 1979 survey report is based on returns from 568 establishments employing 47,443 technicians and technologists. Table 127 presents 1979 median salaries of engineering technicians by type of employment and years since graduation.

Although engineering technicians begin employment at higher salaries in the western states, after only five years of working, those technicians in the Northeastern part of the U.S. are earning more (Table 128).

Engineering technicians working in industry report the highest median salaries, while those working in education earn the least (Table 129). Table 130 presents similar information for engineering bachelor of technology graduates.

Although graduate technicians begin employment at substantially higher salaries than non-graduates, the advantage is reduced with increasing experience. The median annual salary for a graduate technician in 1979 was $11,450 for those with less than a year of experience and $18,050 after about 13 years of experience. This compares to a salary in 1979 of $9,550 for non-graduate technicians after one year of experience. Bachelor's degree technologists, however, have median starting salaries of $14,200 - 24% higher than the median for two-year graduates and 49% more than for non-graduates.

- *D. Dietrich Associates, Inc.* in its *SCIENTIFIC SALARIES SURVEY 1981* finds considerable difference in salaries paid to laboratory aides and technicians by level of responsibility. This salary differential ranges from $5.30 per hour for trainee laboratory aides to $10.46 per hour for the top of the laboratory technician responsibility list (Table 131).

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1979.

Table 125

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF ENGINEERING TECHNICIANS BY YEARS SINCE GRADUATION, 1979 (WEIGHTED NATIONAL DATA)

YEARS SINCE GRADUATION	NUMBER OF TECHNICIANS	SALARY	
		Median	Mean
0	936	$10,200	$10,700
1	1,821	10,800	11,200
2	1,922	11,400	11,750
3	2,131	12,000	12,250
4	2,113	12,550	12,750
5	2,312	13,100	13,250
6	2,197	13,600	13,750
7	2,206	14,100	14,200
8	2,262	14,550	14,650
9-11	7,381	15,400	15,450
12-14	6,520	16,400	16,500
15-17	5,859	17,150	17,250
18-20	5,094	17,700	17,750
21-23	4,905	18,050	18,100
24-26	4,060	18,250	18,300
27-29	3,761	18,400	18,400
30-34	4,927	18,450	18,450
35+	6,240	18,500	18,500

Table 126

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF ENGINEERING BACHELOR OF TECHNOLOGY GRADUATES BY YEARS SINCE GRADUATION, 1979 (WEIGHTED NATIONAL DATA)

YEARS SINCE GRADUATION	NUMBER OF TECHNOLOGISTS	SALARY	
		Median	Mean
0	94	$14,200	$14,150
1	422	14,650	14,650
2	392	15,100	15,150
3	425	15,600	15,650
4	244	16,050	16,100
5	270	16,500	16,600
6	249	17,000	17,100
7	222	17,450	17,600
8	214	17,900	18,050
9-11	623	18,750	18,950
12-14	406	19,900	20,100
15-17	316	20,850	21,100
18-20	256	21,600	21,850
21-23	205	22,050	22,400
24-26	232	22,250	22,700
27-29	199	22,200	22,800
30-34	232	21,900	22,800
35+	195	21,000	22,550

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1979.

Table 127

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1979

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1975								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Aerospace	(23) $11,700	(21) $13,800	(18) $14,700	(63) $15,900	(85) $17,600	(87) $18,150	(120) $18,500	(126) $18,900	(198) $19,000
Machinery	(46) 12,550	(36) 13,550	(49) 14,100	(111) 14,800	(62) 16,100	(45) 16,650	(75) 17,150	(55) 17,800	(104) 18,150
Metal Products	(25) 11,450	(59) 12,900	(65) 13,600	(106) 14,600	(69) 16,250	(54) 16,800	(45) 17,200	(60) 17,500	(128) 17,050
Instruments	(4)	(9) 13,050	(5) 14,050	(37) 15,150	(16) 16,250	(13) 16,450	(16) 16,550	(6) 16,600	(18) 16,600
Electrical & Electronic Equipment	(149) 11,750	(209) 13,800	(225) 14,850	(1,045) 16,40	(838) 19,150	(716) 20,150	(680) 20,850	(587) 21,350	(744) 20,250
Electrical Equipment	(4)	(9) 13,450	(12) 14,800	(52) 16,150	(50) 17,400	(32) 17,600	(44) 17,700	(27) 17,800	(46) 17,800
Electronic Equipment	(303) 11,700	(459) 13,300	(496) 14,100	(1,712) 15,400	(1,219) 17,750	(1,066) 18,700	(959) 19,500	(813) 20,400	(1,068) 19,900
Chemicals	(14) 10,350	(26) 12,600	(27) 13,650	(89) 15,050	(77) 16,950	(57) 17,400	(45) 17,600	(44) 17,650	(82) 17,450
Petroleum	(53) 11,900	(121) 13,600	(108) 14,500	(342) 15,700	(205) 17,800	(172) 18,600	(128) 19,250	(171) 20,100	(348) 20,650
Other Manufactured Products	(3)	(10) 12,350	(9) 12,850	(40) 13,600	(23) 14,750	(23) 15,250	(14) 15,600	(8) 16,100	(34) 16,500
Miscellaneous Manufacturing	(12) 10,650	(41) 12,300	(33) 13,150	(122) 14,350	(85) 16,400	(79) 17,150	(69) 17,750	(66) 18,350	(160) 18,400
Construction	(31) 10,450	(41) 12,750	(20) 14,000	(71) 15,800	(87) 19,100	(61) 20,300	(57) 21,050	(39) 21,500	(86) 20,550
Construction & Consulting	(116) 10,450	(111) 12,700	(78) 13,800	(247) 15,400	(197) 17,750	(157) 18,450	(147) 18,900	(94) 19,150	(223) 19,000
Engineering & Architectural Consulting	(85) 10,300	(70) 12,900	(58) 14,000	(176) 15,300	(110) 16,900	(96) 17,300	(90) 17,550	(55) 17,800	(137) 17,850
Research and Technical Services	(162) 12,700	(143) 14,450	(144) 15,300	(553) 16,450	(295) 18,400	(272) 19,050	(202) 19,500	(223) 19,850	(452) 19,550
Research and Development	(225) 12,750	(223) 14,550	(223) 15,450	(797) 16,600	(525) 18,400	(521) 18,950	(426) 19,250	(432) 19,400	(829) 18,950
Technical Services	(43) 10,150	(56) 11,800	(36) 12,600	(105) 13,700	(56) 15,500	(53) 16,050	(54) 16,350	(21) 16,450	(64) 15,800
All Utilities	(125) 11,600	(194) 14,650	(203) 16,000	(638) 17,600	(353) 19,650	(298) 20,150	(261) 20,500	(228) 20,800	(372) 20,900
Electric Utilities	(123) 11,650	(187) 14,650	(193) 16,000	(627) 17,700	(339) 19,750	(281) 20,250	(253) 20,600	(212) 20,900	(351) 21,000
Gas Utilities and Pipelines	(2)	(7) 11,450	(10) 12,800	(9) 14,700	(13) 17,600	(16) 18,450	(8) 18,950	(16) 19,300	(21) 19,300
Communication Services	(110) 13,550	(37) 16,300	(62) 17,300	(273) 18,400	(157) 19,450	(171) 19,700	(175) 19,850	(172) 19,950	(197) 20,000

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1979.

Table 128

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS IN INDUSTRY BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE GRADUATION, 1979

GEOGRAPHIC AREA	YEARS SINCE GRADUATION - BASE YEAR 1979								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Northeast	(264) $11,850	(219) $13,850	(208) $14,850	(707) $16,200	(458) $18,250	(425) $18,900	(368) $19,250	(371) $19,400	(745) $18,900
North Central	(99) 11,750	(203) 13,900	(236) 14,850	(747) 16,150	(505) 18,050	(387) 18,700	(350) 19,200	(325) 19,700	(633) 20,000
South	(187) 11,100	(274) 13,100	(252) 14,000	(699) 15,100	(449) 16,750	(396) 17,250	(347) 17,600	(265) 18,000	(380) 18,150
West	(141) 12,250	(221) 13,750	(216) 14,500	(584) 15,550	(358) 17,450	(353) 18,100	(372) 18,650	(287) 19,050	(490) 18,500

Table 129

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1979

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1979								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Employment Sectors	(1,088) $10,750	(1,449) $12,950	(1,449) $13,950	(5,026) $15,200	(3,827) $16,950	(3,311) $17,500	(3,116) $17,900	(2,424) $18,300	(4,081) $18,450
All Industry	(264) 11,300	(976) 13,750	(954) 14,700	(3,292) 16,100	(2,307) 18,400	(2,013) 19,150	(1,880) 19,700	(1,656) 20,000	(2,744) 19,500
All Manufacturing Industry	(309) 11,700	(475) 13,450	(481) 14,300	(1,765) 15,650	(1,325) 18,050	(1,107) 18,950	(1,053) 19,650	(960) 20,250	(1,498) 19,450
All Non-Manufacturing Industry	(473) 11,750	(501) 14,200	(473) 15,300	(1,527) 16,800	(982) 18,700	(906) 19,250	(827) 19,500	(696) 19,700	(1,246) 19,650
All Government	(301) 9,800	(458) 11,300	(485) 12,050	(1,680) 13,100	(1,461) 14,800	(1,250) 15,350	(1,181) 15,750	(692) 16,000	(1,122) 15,800
Federal Government	(174) 10,900	(244) 13,000	(254) 14,050	(1,001) 15,500	(539) 17,650	(494) 18,250	(254) 18,550	(234) 18,450	(455) 17,650
State Government	(140) 9,150	(249) 10,450	(276) 11,100	(889) 12,100	(1,017) 13,850	(863) 14,500	(925) 15,000	(471) 15,350	(759) 14,450
Local Government	(16) 9,300	(8) 11,900	(11) 13,200	(61) 15,050	(53) 17,800	(60) 18,650	(52) 19,250	(51) 19,850	(66) 20,100
Education	(5) 10,750	(15) 12,100	(10) 12,800	(54) 13,750	(59) 15,300	(48) 15,850	(55) 16,200	(76) 16,550	(215) 16,250

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1979.

Table 130

NUMBER AND MEDIAN SALARIES OF ENGINEERING BACHELOR OF TECHNOLOGY GRADUATES BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1979

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1979								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Employment Sectors	(203) $14,250	(148) $16,100	(141) $17,050	(389) $18,400	(228) $20,750	(195) $21,600	(147) $22,200	(165) $22,500	(152) $21,100
All Industry	(186) 14,350	(127) 16,400	(117) 17,400	(332) 18,900	(202) 21,300	(175) 22,100	(135) 22,600	(148) 22,700	(131) 21,100
All Manufacturing Industry	(68) 14,050	(66) 16,200	(60) 17,250	(207) 18,800	(157) 21,350	(148) 22,150	(112) 22,650	(122) 22,550	(103) 20,600
All Non-Manufacturing Industry	(118) 14,500	(61) 16,600	(57) 17,600	(125) 19,050	(45) 21,500	(27) 22,450	(23) 23,250	(26) 24,400	(28) 25,150
Miscellaneous Manufacturing	(6) 13,800	(10) 15,950	(10) 16,900	(19) 18,200	(17) 19,950	(9) 20,350	(13) 20,500	(12) 20,200	(22) 19,200
Electrical & Electronic Products	(35) 13,700	(35) 16,050	(37) 17,200	(142) 18,900	(126) 21,550	(130) 22,400	(91) 22,850	(98) 22,700	(68) 20,800
Research and Development	(53) 14,800	(10) 16,750	(16) 17,450	(19) 18,000	(8) 17,400	(8) 16,450	(4)	(3)	(4)
All Utilities	(40) 14,000	(32) 16,650	(30) 17,950	(72) 19,850	(30) 23,200	(16) 24,550	(12) 25,650	(18) 27,150	(24) 28,100
All Government	(11) 13,500	(18) 13,750	(18) 13,850	(37) 14,050	(19) 14,600	(13) 14,900	(6) 15,200	(10) 16,000	(13) 18,100
Education	(6) 13,050	(3)	(6) 14,700	(20) 15,650	(7) 17,650	(7) 18,750	(6) 19,900	(7) 22,400	(8) 27,200

SOURCE: D. Dietrich Associates, Inc., Scientific Salaries Survey 1981, June 1981.

Table 131

NUMBER, AVERAGE AND MEDIAN SALARIES OF LABORATORY AIDES AND TECHNICIANS BY TITLE*, MAY 1981

TITLE*	Number of Employees	Weighted Average Hourly Salary	Firm's Actual Median Salary
Laboratory Aide/ Trainee	270	$5.30	$4.92
Laboratory Technician I	659	6.42	5.84
Laboratory Technician II	1,075	7.20	6.75
Laboratory Technician III	1,156	8.28	7.62
Laboratory Technician IV	681	9.76	9.42
Laboratory Technician V	290	10.46	10.85
Supervisory Laboratory Technician/ Laboratory Technician VI	239	10.50	10.14

* See original survey for definition of Title by level of responsibility.

FEDERAL SALARIES

• On October 1, 1981, the federal government's 1.4 million white-collar workers received a 4.8% salary increase - the smallest since a 4.8% raise in 1973 and about half the size of the 1980 increase of 9.1%. However, because Congress has established a salary ceiling, a grade 14 worker in the top or 10th step will not get the full 4.8% raise, but will go up only to the $50,112.50 ceiling. Even before the October 1, 1981 raise, 34,800 employees in grades 15 through 18 and the Senior Executive Service were held to the pay ceiling, and in October 1981, the number of executives at the top of the pay scale jumped to 46,100. Table 132 presents the white-collar salary schedule effective as of October 1, 1981, while Table 133 presents the schedule in effect on October 1, 1980 for comparison.

Table 134 presents the number, median grade and average salary of federal white-collar workers by sex in selected occupations for all geographical areas of the U.S. as of October 1, 1980. Women continue to be paid less than men in almost every occupational series listed. For example, in the engineering and architecture series, women's salary as a percentage of men's ranged from a high of 84% in architecture to a low of 64.2% in the electronics technician category. Overall in this category, highest average salaries were reported by those in general engineering ($38,318) followed by petroleum engineers ($38,159).

In the sciences, those workers employed in the agicultural extension categories and general fish & wildlife administration (where women earn less than half the male salary average) reported the highest average salaries - $44,456 and $40,544 respectively. The lowest, as expected, were reported by the technicians. Salaries in the health and medical areas show wide variation between medical officers at the top with an average salary of $47,643 and pharmacy technicians at the bottom at $23,855. In the social sciences, those persons working in international relations commanded the highest average salaries at $39,718 (Table 134).

• The *U.S. Department of Labor* in its *NATIONAL SURVEY OF PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL PAY* collects salary data on private industry employment. Table 135 compares that data for selected occupations and levels of responsibility with salaries paid to federal workers as of March 1980.

• Annual salaries of civilian doctoral scientists and engineers employed by the federal government are compared for 1975 through 1979 in Table 136. These salary data are published by the *National Science Foundation* in its *CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES, 1979*. In 1979, highest median salaries were paid to mathematicians while the lowest were paid to biological scientists.

• In *SALARIES 1981*, the *American Chemical Society* analyzed salary information of its members by type of employer. Table 137, which presents salaries of chemists employed in the federal government by degree level, sex and years since the B.S. for 1981, shows that women continue to be paid less than men regardless of degree level or years since the B.S. except at the entry level.

SOURCE: U.S. Office of Personnel Management.

Table 132

ANNUAL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS

October 1, 1981

	1	2	3	4	5	6	7	8	9	10
GS- 1	$8,342	$8,620	$8,898	$9,175	$9,453	$9,615	$9,890	$10,165	$10,178	$10,439
2	9,381	9,603	9,913	10,178	10,292	10,595	10,898	11,201	11,504	11,807
3	10,235	10,576	10,917	11,258	11,599	11,940	12,281	12,622	12,963	13,304
4	11,490	11,873	12,256	12,639	13,022	13,405	13,788	14,171	14,554	14,937
5	12,854	13,282	13,710	14,138	14,566	14,994	15,422	15,850	16,278	16,706
6	14,328	14,806	15,284	15,762	16,240	16,718	17,196	17,674	18,152	18,630
7	15,922	16,453	16,984	17,515	18,046	18,577	19,108	19,639	20,172	20,701
8	17,634	18,222	18,810	19,398	19,986	20,574	21,162	21,750	22,338	22,926
9	19,477	20,126	20,775	21,424	22,073	22,722	23,371	24,020	24,669	25,318
10	21,449	22,164	22,879	23,594	24,309	25,024	25,739	26,454	27,169	27,884
11	23,566	24,352	25,138	25,924	26,710	27,496	28,282	29,068	29,854	30,640
12	28,245	29,187	30,129	31,071	32,013	32,955	33,897	34,839	35,781	36,723
13	33,586	34,706	35,826	36,946	38,066	39,186	40,306	41,426	42,546	43,666
14	39,689	41,012	42,335	43,658	44,981	46,304	46,627	48,950	50,273*	51,596*
15	46,685	48,241	49,797	51,353*	52,909*	54,465*	56,021*	57,577*	59,183*	60,689*
16	54,755*	56,580*	58,405*	60,230*	62,055*	63,880*	65,705*	67,530*	69,355*	
17	64,142*	66,280*	68,418*	70,556*	72,694*					
18	75,177*									

* The rate of basic pay for employees at these rates is limited by Section 5308 of Title 5 of the United States Code to the rate for Level V of the Executive Schedule which, pursuant to Public Law 95-66, would be $50,112,50.

SOURCE: Office of Personnel Management

Table 133

ANNUAL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS, OCTOBER 1, 1980

GS-	1	2	3	4	5	6	7	8	9	10
1	$ 7,960	$ 8,225	$ 8,490	$ 8,755	$ 9,020	$ 9,175	$ 9,437	$ 9,699	$ 9,712	$ 9,954
2	8,951	9,163	9,459	9,712	9,820	10,109	10,398	10,687	10,976	11,265
3	9,766	10,092	10,418	10,744	11,070	11,396	11,722	12,048	12,374	12,700
4	10,963	11,328	11,693	12,058	12,423	12,788	13,153	13,518	13,883	14,248
5	12,266	12,675	13,084	13,493	13,902	14,311	14,720	15,129	15,538	15,947
6	13,672	14,128	14,584	15,040	15,496	15,952	16,408	16,864	17,320	17,776
7	15,193	15,699	16,205	16,711	17,217	17,723	18,229	18,735	19,241	19,747
8	16,826	17,387	17,948	18,509	19,070	19,631	20,192	20,753	21,314	21,875
9	18,585	19,205	19,825	20,445	21,065	21,685	22,305	22,925	23,545	24,165
10	20,467	21,149	21,831	22,513	23,195	23,877	24,559	25,241	25,923	26,605
11	22,486	23,236	23,986	24,736	25,486	26,236	26,986	27,736	28,486	29,236
12	26,951	27,849	28,747	29,645	30,543	31,441	32,339	33,237	34,135	35,033
13	32,048	33,116	34,184	35,252	36,320	37,388	38,456	39,524	40,592	41,660
14	37,871	39,133	40,395	41,657	42,919	44,181	45,443	46,705	47,967	49,229
15	44,547	46,032	47,517	49,002	*50,487	*51,972	*53,457	*54,942	*56,427	*57,912
16	52,247	*53,989	*55,731	*57,473	*59,215	*60,957	*62,699	*64,441	*66,183	
17	*61,204	*63,244	*65,284	*67,324	*69,364					
18	*71,734									

* The rate of basic pay payable for employees at these rates is limited to the rate for level V of the Executive Schedule, which is expected to remain at $50,112.50.

SOURCE: Office of Personnel Management, Unpublished Data, October 31, 1980.

Table 134

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1980

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Engineering	17,113	13	$38,318	16,898	$38,433	215	$29,286	76.2%
Engineering Technician	26,210	9	21,670	24,248	22,216	1,962	14,924	67.2
Safety Engineering	660	12	32,985	644	33,189	16	24,773	74.6
Fire Prevention Engineering	120	13	33,539	120	33,539			
Materials Engineering	931	13	36,507	895	36,953	36	25,400	68.7
Landscape Architecture	629	12	30,588	577	31,124	52	24,636	79.2
Architecture	1,648	12	31,434	1,544	31,754	104	26,681	84.0
Construction Control	4,276	9	21,065	4,214	21,142	62	15,797	74.7
Civil Engineering	15,760	12	32,458	15,431	32,644	329	23,739	72.7
Surveying Technician	2,745	4	13,322	2,474	13,649	271	10,342	75.8
Engineering Drafting	2,071	5	14,985	1,605	15,219	466	14,179	93.2
Sanitary Engineering	1,910	12	30,988	1,771	31,522	139	24,181	76.7
Construction Analyst	892	11	27,631	860	27,894	32	20,584	73.8
Mechanical Engineering	10,200	12	32,152	10,067	32,259	133	24,000	74.4
Nuclear Engineering	2,422	13	36,736	2,387	36,861	35	28,243	76.6
Electrical Engineering	4,499	12	31,693	4,417	31,819	82	24,902	78.3
Electronics Engineering	19,708	12	34,751	19,450	34,852	258	27,150	77.9
Electronics Technician	23,218	11	26,437	22,828	26,597	390	17,081	64.2
Biomedical Engineering	183	12	29,337	169	29,732	14	24,561	82.6
Aerospace Engineering	7,871	13	37,906	7,711	38,101	160	28,545	74.9
Naval Architecture	1,066	12	34,359	1,041	34,566	25	25,775	74.6
Ship Surveying	76	12	29,375	76	29,375			
Mining Engineering	503	12	34,985	494	35,153	9	25,739	73.2
Petroleum Engineering	442	13	38,159	434	38,372	8	26,639	69.4
Agricultural Engineering	431	11	31,616	428	31,691	3	20,975	66.2

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Unpublished Data, October 31, 1980.

Table 134 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1980

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Ceramic Engineering	46	13	$37,806	45	$37,980	1	$29,986	79.0%
Chemical Engineering	1,468	12	33,218	1,406	33,607	62	24,391	72.6
Welding Engineering	94	12	30,816	92	31,014	2	21,726	70.1
Industrial Engineering Technician	2,350	9	22,789	2,157	23,219	193	17,975	77.4
Industrial Engineering	2,509	12	31,971	2,474	32,066	35	25,245	78.7
Engr. & Architecture Student Trainee	1,721	4	11,058	1,347	11,152	374	10,719	96.1
General Physical Science	4,884	13	38,926	4,507	39,975	377	26,382	66.0
Health Physics	480	13	34,264	446	34,853	34	26,535	76.1
Physics	4,634	13	36,830	4,484	37,086	150	29,195	78.7
Physical Science Technician	3,941	7	17,923	3,040	18,822	901	14,888	79.1
Geophysics	544	13	33,965	528	34,291	16	23,205	67.7
Hydrology	2,051	12	30,666	1,950	31,150	101	21,318	68.4
Chemistry	8,083	12	31,512	6,605	32,765	1,478	25,912	79.1
Metallurgy	554	12	35,247	541	35,346	13	31,127	88.1
Astronomy and Space Science	574	13	39,808	545	40,108	29	34,160	85.2
Meteorology	2,112	12	32,911	2,050	33,167	62	24,435	73.7
Meteorological Technician	2,366	10	22,382	2,213	22,706	153	17,699	77.9
Geology	2,498	12	31,935	2,257	32,663	241	25,121	76.9
Oceanography	807	12	31,460	742	32,104	65	24,114	75.1
Cartography	4,358	11	25,440	3,672	26,275	686	20,975	79.8
Cartographic Technician	2,240	8	18,973	1,645	19,898	595	16,417	82.5
Geodesy	307	12	29,968	284	30,398	23	24,657	81.1
Food Technology	187	12	32,294	143	34,336	44	25,661	74.7
Forest Products Technology	112	13	35,303	109	35,575	3	25,426	71.5
General Fish & Wildlife Admin.	197	14	40,544	187	41,633	10	20,174	48.5

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Unpublished Data, October 31, 1980.

Table 134 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1980

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Biological Science	4,283	12	$29,645	3,480	$30,875	803	$24,311	78.7%
Microbiology	1,776	12	29,748	1,168	32,086	608	25,256	78.7
Biological Technician	5,850	6	15,773	3,874	16,312	1,976	14,716	90.2
Ecology	227	12	28,531	184	29,497	33	22,851	77.5
Zoology	136	13	35,571	116	36,760	20	28,678	78.0
Entomology	762	13	33,997	731	34,384	31	24,865	72.3
Botany	182	11	28,924	133	31,020	49	23,236	74.9
Plant Pathology	310	13	36,369	293	37,070	17	24,293	65.5
Plant Physiology	262	13	35,211	246	35,638	16	28,650	80.4
Horticulture	100	11	28,634	87	30,252	13	17,808	58.9
Soil Conservation	4,748	11	25,096	4,602	25,381	146	16,114	63.5
Soil Conservation Tech.	2,426	6	15,631	2,350	15,760	76	11,630	73.8
Soil Science	1,949	11	26,192	1,878	26,496	71	18,125	68.4
Agronomy	344	12	31,561	341	31,678	3	18,236	57.6
Agriculture Management	2,823	11	23,523	2,665	23,887	158	17,365	72.8
Agricultural Extension	51	14	44,456	37	45,172	14	42,562	94.2
Range Conservation	1,270	9	22,363	1,199	22,695	71	16,761	73.9
Forestry	5,713	11	28,353	5,630	28,495	83	18,682	65.6
Forestry Technician	10,492	5	13,833	8,734	14,432	1,758	10,859	75.2
Fishery Biology	1,319	11	27,733	1,230	28,269	89	17,332	61.3
Wildlife Biology	1,222	11	26,443	1,117	27,063	105	19,850	73.4
Digital Computer Systems Admin.	1,633	13	37,328	1,417	38,564	216	29,221	75.8
Computer Operation	10,717	7	17,690	6,278	18,787	4,439	16,138	85.9
Computer Specialist	28,840	12	29,056	22,117	30,387	6,723	24,676	81.2
Computer Science	473	12	30,880	371	32,663	102	24,391	74.7

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Unpublished Data, October 31, 1980.

Table 134 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1980

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Computer Clerk & Assistant	7,192	5	$ 15,542	2,317	$ 16,575	4,875	$ 15,051	90.8 %
Program Management	4,121	14	44,625	3,783	45,042	338	39,962	88.7
Management Analysis	11,112	12	28,435	7,254	30,689	3,858	24,198	78.8
Communications Management	2,214	12	29,386	2,092	29,699	122	24,028	80.9
Program Analysis	13,055	12	32,159	8,492	34,951	4,563	26,964	77.1
Communications Specialist	2,249	11	26,849	1,956	27,742	293	20,882	75.3
Operations Research	3,382	13	36,289	3,049	37,250	333	27,486	73.8
Mathematics	3,666	12	31,648	2,874	33,094	792	26,397	79.8
Mathematics Technician	203	6	15,951	88	15,507	115	16,291	105.1
Mathematical Statistician	1,079	12	32,281	853	33,715	226	26,869	79.7
Statistician	2,873	12	30,691	2,042	32,462	831	26,338	81.1
Statistical Assistant	2,999	6	16,041	479	16,073	2,520	16,035	99.8
Actuary	127	13	35,661	108	36,607	19	30,285	82.7
Accounting	21,669	12	29,212	18,449	30,258	3,220	23,215	76.7
General Attorney	17,268	13	37,140	13,460	38,493	3,808	32,358	84.1
Medical Officer	9,406	15	47,643	8,021	47,825	1,385	46,589	97.4
Physicians Assistant	919	11	22,169	647	22,762	272	20,756	91.2
Nurse	36,010	9	21,227	2,541	19,918	33,469	21,326	107.1
Nurse Anesthetist	519	12	30,932	153	30,795	366	30,989	100.6
Nursing Assistant	35,630	5	13,185	12,041	13,512	23,589	13,019	96.4
General Health Science	1,296	13	33,920	794	37,112	502	28,871	77.8
Medical Technologist	4,468	7	18,790	1,449	19,271	3,019	18,559	96.3
Medical Technician	2,651	6	15,716	1,170	16,339	1,481	15,225	93.2
Medical Radiology Technician	2,675	6	16,073	1,573	16,728	1,102	15,137	90.5
Dental Officer	977	15	44,790	944	45,239	33	31,952	70.6

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Unpublished Data, October 31, 1980.

Table 134 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1980

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Dental Assistant	2,934	4	$12,887	218	$12,915	2,716	$12,885	99.8%
Dental Hygiene	373	5	14,318	8	13,698	365	14,332	104.6
Dietitian	1,188	9	23,877	35	26,543	1,153	23,796	89.7
Occupational Therapist	668	9	20,858	88	21,727	580	20,726	95.4
Physical Therapist	716	9	21,325	263	22,554	453	20,611	91.4
Educational Therapist	110	9	20,634	57	21,158	53	20,069	94.9
Optometrist	73	12	30,906	72	30,961	1	26,951	87.0
Speech Pathology & Audiol.	533	12	28,939	283	31,308	250	26,257	83.9
Orthotist & Prosthetist	249	9	20,671	243	20,752	6	17,384	83.8
Podiatrist	45	13	38,329	43	38,343	2	38,018	99.2
Pharmacist	2,420	11	25,385	1,986	25,808	434	23,452	90.9
Pharmacy Technician	1,544	5	12,855	787	13,010	757	12,694	97.5
Pharmacology	388	13	35,639	305	36,475	83	32,566	89.3
Physiology	421	13	33,072	348	34,097	73	28,184	82.7
Genetics	248	13	36,395	231	37,010	17	28,041	75.8
Veterinary Med. Science	2,164	12	33,843	2,078	34,638	86	29,112	85.5
Industrial Hygiene	900	12	26,363	740	27,469	160	21,247	77.3
Consumer Safety	1,667	12	31,091	1,389	32,076	278	26,166	81.6
Environmental Health Tech.	149	7	16,610	136	16,839	13	14,212	84.4
Animal Health Technician	746	7	18,526	709	18,749	37	14,256	76.0
Economics	5,923	13	33,597	4,895	34,851	1,028	27,625	79.3
Psychology	3,318	13	33,704	2,760	34,629	558	29,130	84.1
Psychology Aid & Tech.	474	7	16,566	213	17,287	261	15,977	92.4
Social Science	3,077	12	32,235	1,974	33,900	1,103	29,255	86.3
Social Work	3,562	11	26,762	2,008	27,431	1,554	25,897	94.4

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Unpublished Data, October 31, 1980.

Table 134 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1980

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Sociology	102	12	$ 30,125	71	$ 31,624	31	$ 26,692	84.4%
Foreign Affairs	2,220	13	38,063	1,856	39,256	364	31,979	81.5
International Relations	57	14	39,718	45	42,385	12	29,718	70.1
Manpower Res. & Analysis	83	14	39,412	54	42,592	29	33,492	78.6
Manpower Development	1,290	13	35,013	955	36,776	335	29,986	81.5
Geography	183	12	28,769	148	29,578	35	25,348	85.7
Equal Opportunity	6,414	12	28,237	3,640	30,276	2,774	25,561	84.4
History	536	12	30,457	429	31,833	107	24,938	78.3
General Anthropology	59	13	37,915	49	38,855	10	33,311	85.7
Archeology	417	11	22,831	298	24,297	119	19,161	78.9
Secretary	79,470	5	15,285	734	14,439	78,736	15,293	105.9

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Department of Labor, National Survey of Professional Administrative, Technical and Clerical Pay, March 1980.

Table 135

COMPARISON OF AVERAGE ANNUAL SALARIES IN PRIVATE INDUSTRY WITH SALARY RATES FOR FEDERAL EMPLOYEES UNDER THE GENERAL SCHEDULE, MARCH 1980

OCCUPATION AND LEVEL*	Salaries in Industry	Grade	SALARY RATES UNDER THE GENERAL SCHEDULE										
			1	2	3	4	5	6	7	8	9	10	Average Salary**
Accountants I	$15,149	GS-5	$11,243	$11,618	$11,993	$12,368	$12,743	$13,118	$13,493	$13,868	$14,243	$14,618	$12,744
Chemists I	16,200												
Computer Operators II	12,016												
Engineers I	19,411												
Eng. technicians III	16,756												
Drafters IV	17,215												
Accountants II	18,427	GS-7	13,925	14,389	14,853	15,317	15,781	16,245	16,709	17,173	17,637	18,101	15,729
Chemists II	19,571												
Computer Operators IV	16,050												
Engineers II	21,285												
Eng. technicians IV	19,547												
Drafters V	21,690												
Accountants III	21,299	GS-9	17,035	17,603	18,171	18,739	19,307	19,875	20,443	21,011	21,579	22,147	19,110
Attorneys I	29,911												
Chemists III	23,373												
Computer Operators VI	19,511												
Engineers III	24,160												
Eng. Technicians V	22,323												
Accountants IV	26,158	GS-11	20,611	21,298	21,985	22,672	23,359	24,046	24,733	25,420	26,107	26,794	23,331
Attorneys II	25,549												
Chemists IV	27,681												
Chief Accountants I	28,347												
Engineers IV	28,486												
Accountants V	31,937	GS-12	24,703	25,526	26,349	27,172	27,995	28,818	29,641	30,464	31,287	32,110	27,958
Attorneys III	33,034												
Chemists V	33,793												
Chief Accountants II	32,662												
Engineers V	33,141												
Accountants VI	40,292	GS-13	29,375	30,354	31,333	32,312	33,291	34,270	35,249	36,228	37,207	38,186	33,593
Attorneys IV	40,864												
Chemists VI	38,137												
Chief Accountants III	41,092												
Engineers VI	38,259												
Attorneys V	49,864	GS-14	34,713	35,870	37,027	38,184	39,341	40,498	41,655	42,812	43,969	45,126	39,635
Chemists VII	45,883												
Chief Accountants IV	50,073												
Engineers VII	43,242												
Attorneys VI	60,641	GS-15	40,832	42,193	43,554	44,915	46,276	47,637	48,998	50,359	51,720	53,081	45,731
Engineers VIII	50,079												

*See Original Survey for definition of levels.

** Mean salary of all general schedule employees in each grade as of March 31, 1980

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323.

Table 136

NUMBER AND MEDIAN ANNUAL SALARIES OF CIVILIAN DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED BY THE FEDERAL GOVERNMENT BY FIELD, 1975-79

FIELD	1975				1977				1979			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
TOTAL	18,995	100.0	7.4	$26,300	21,368	100.0	7.5	$29,700	23,923	100.0	7.6	33,400
Physical Scientists	3,745	19.7	6.9	26,000	3,945	18.5	6.9	29,700	4,591	19.2	7.6	33,200
Chemists	1,684	8.9	4.7	26,400	1,814	8.5	4.9	29,100	2,110	8.8	5.3	32,900
Physicists/Astronomers	2,061	10.9	10.9	25,700	2,131	10.0	10.6	30,100	2,481	10.4	12.0	33,300
Mathematical Scientists	556	2.9	4.1	27,600	604	2.8	4.1	29,300	817	3.4	5.3	36,300
Mathematicians	372	2.0	3.1	26,000	449	2.1	3.4	29,400	575	2.4	4.4	38,500
Statisticians	184	1.0	10.6	30,100	155	0.7	9.0	*	242	1.0	10.2	*
Computer Specialists	194	1.0	5.5	24,800	251	1.2	4.4	30,500	336	1.4	5.0	*
Environmental Scientists	2,210	11.6	18.2	27,500	2,415	11.3	18.5	30,700	2,714	11.3	18.6	35,300
Earth Scientists	1,557	8.2	16.3	27,700	1,634	7.6	16.7	30,600	1,827	7.6	16.4	36,000
Oceanographer	239	1.3	18.7	28,500	287	1.3	18.4	28,300	387	1.6	23.3	32,400
Atmospheric Scientists	414	2.2	31.4	27,200	494	2.3	29.1	31,400	500	2.1	27.7	35,400
Engineers	3,029	15.9	7.1	26,700	3,519	16.5	7.8	30,000	3,571	14.9	7.1	35,200
Life Scientists	6,279	33.1	9.6	25,400	6,760	31.6	9.4	28,400	7,485	31.3	9.3	32,000
Biological Scientists	3,442	18.1	8.8	25,100	3,367	15.8	8.0	27,900	3,949	16.5	8.6	30,900
Agricultural Scientists	2,039	10.7	15.8	25,000	2,496	11.7	17.5	27,700	2,472	10.3	16.4	32,700
Medical Scientists	798	4.2	6.1	29,000	897	4.2	5.8	32,400	1,064	4.4	5.5	35,300
Psychologists	970	5.1	3.2	26,800	1,231	5.8	3.6	30,600	1,102	4.6	2.9	34,800
Social Scientists	2,012	10.6	5.8	29,200	2,643	12.4	6.2	31,400	3,307	13.8	6.8	34,600
Economists	918	4.8	9.3	27,500	950	4.4	8.8	32,900	1,262	5.3	10.8	37,900
Sociologists/Anthropologists	155	0.8	2.0	*	132	0.6	1.4	*	121	0.5	1.2	*
Other Social Scientists	939	4.9	5.6	30,900	1,561	7.3	7.0	31,300	1,924	8.0	7.2	32,700

*No median computed for groups with fewer than 20 individuals reporting salary.

NOTES: Percents may not add to 100 because of rounding. Median salaries computed for full-time employed civilians only.

SOURCE: American Chemical Society, *Salaries 1981 - Analysis of the American Chemical Society's 1981 Survey of Salaries and Employment*, July 1981.

Table 137

MEDIAN SALARIES OF CHEMISTS EMPLOYED IN GOVERNMENT BY DEGREE LEVEL, SEX AND YEARS SINCE B. S., 1981

YEARS SINCE B. S.	BACHELOR'S			MASTER'S			Ph.D.		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1 or less	$12,000	$15,200	$13,600	$	$	$	$	$	$
2-4	15,900	15,193	15,600		19,800	19,800			
5-9	22,236	19,491	21,000	22,243	19,000	20,000	25,250	30,000	26,000
10-14	24,998	23,986	24,800	25,000	27,000	25,000	31,810	28,747	30,823
15-19	30,000	21,624	29,800	32,119	29,823	31,000	34,092	29,000	33,888
20-24	33,238	34,198	33,300	31,250	27,640	30,000	36,000	38,936	36,280
25-29	30,000	33,200	31,400	34,090	26,000	34,000	40,000	33,694	40,000
30-34	38,000	31,000	35,000	35,000	18,000	35,000	47,983	34,200	47,000
35-39	36,600	28,825	35,000	40,000	36,000	36,000	46,000	31,000	45,443
40+	39,000	25,630	37,000	40,000	39,000	39,500	43,250	43,000	42,620
All Years	29,000	23,100	28,000	30,500	25,000	30,000	37,000	30,000	36,320

ACADEMIC SALARIES

• The *Annual Report on the Economic Status of the Profession* by the *American Association of University Professors* finds that salaries for faculty members increased by 8.7% from 1979-80 to 1980-81, while the Consumer Price Index rose by 11.6% during that period. Thus, average salaries expressed in real dollars declined by 2.6% continuing a trend that has lasted for the past several years. The largest percentage increases were reported by institutions without academic ranks (9.6%). By type of affiliation, again, the largest percentage increases were reported by church-related institutions without academic rank (Table 138).

Regardless of type of affiliation of the higher education institutions or the rank of faculty employed in the institutions, women consistently earn less than their male counterparts as shown in Table 139. Overall, in 1980-81, women's salaries as a percentage of men's ranged from 92.0% at the professorial rank to 95.3% at the assistant professorial rank. Although women have traditionally been more concentrated in the lower ranks, there is evidence of upward movement in the ranks, but not sufficient mobility to erase all the salary differentials. Another explanation for the salary disparity between the sexes is that women faculty tend to be concentrated in lower-paid disciplines.

By geographic area, faculty (all ranks combined) reported higher salaries when working in the Pacific region of the U. S. and lowest in the east south central states (Table 140). This comparison holds true even when examining total compensation for faculty members as shown in Table 141. By state, faculty working in Alaska and California reported the highest average salaries ($35,000 and $28,300 respectively) while those working in South Dakota ($29,390) and West Virignia ($19,890) earned the lowest (Table 142).

Lecturers tend to receive a higher percentage of return in fringe benefits as a percentage of either salary or total compensation than do other faculty members, while those faculty employed at institutions without academic rank receive the lowest percentage return of salary or compensation in fringe benefits (Table 143). Overall, salaries paid faculty members in 1980-81 ranged from $30,870 paid to full professors to $17,170 paid to instructors.

• Preliminary data released by the *National Center for Education Statistics* show that at all ranks women consistently have lower salaries whether on 9-month contracts (Table 144) or 12-month contracts (Table 145). By type of institution for all ranks combined, the largest salary disparity exists for those women employed in universities and the lowest at two-year institutions regardless of length of contract (Tables 144 and 145). These salary differences also prevail regardless of academic rank.

Overall, faculty employed full-time experienced an 8.6% increase in salary from 1979-80 to 1980-81. Salary increases were somewhat higher at private institutions than at public ones - 9.1% verus 8.4% respectively. Lecturers employed in private institutions received the highest percentage increases over the past year - 12.2% (Table 146).

Regardless of sex or academic rank, Alaska paid its faculty members the highest average salaries in 1979-80 and South Dakota the lowest (Table 147).

• The salary survey conducted for the CHRONICLE OF HIGHER EDUCATION by *John Minter Associates, Inc.* provides data on a systematically drawn sample of 4,800 faculty at public and private four-year institutions and public two-year institutions throughout the U.S. Despite the explanation advanced by the American Association of University Professors that part of the salary discrepancy between men and women is explained by teaching field, when compared by discipline, salary disparities continue to exist. Table 148 shows that average salaries of men were above those of women in all of the eight fields examined, including vocational education, home economics, nursing and health where women tend to predominate.

Women not only get paid lower salaries than do their male counterparts, but also earn less outside income regardless of field as shown in Table 149. The highest earnings above the base salary for both men and women faculty members were reported by those in the business and economics field - $9,119 and $4,526 respectively.

Minter & Associates also found that regardless of age, men had higher average and median annual salaries than did women and that the salary differential widened with age. Non-white faculty members had higher salaries than did all women regardless of age, but lower than all men (Table 150).

Field plays an important part in salary received by faculty members. Full profesors in engineering and computer science are being paid about 12% more, on the average than their colleagues of equal rank in the arts. The salary data show that a fourth of the assistant professors in the social science disciplines are receiving salaries below $16,000. Regardless of rank, faculty employed in engineering and computer science earn higher salaries than do those in any of the other disciplines surveyed - an indication of the high demand for these specialists (Table 151). Again, regardless of type of institution, engineering and computer science faculty report the highest salaries (Table 152). Of the disciplines surveyed, faculty employed in vocational education, home economics, nursing and health reported the lowest salaries regardless of rank or type of institution.

• The *National Science Foundation* reports that although life scientists represent the largest proportion (30%) of all doctoral scientists and engineers employed by educational institutions in 1979, the highest salaries were received by engineers ($30,000) and medical scientists ($29,900). The lowest salaries were paid to doctoral sociologists/anthropologists ($23,900). Table 153 compares the median salaries of doctoral scientists and engineers employed in educational institutions from 1975 through 1979.

For those doctoral scientists and engineers employed by educational institutions who are college teachers, engineers again reported the highest salaries regardless of academic rank or length of contract (Table 154).

• The annual 1980 survey of graduate departments conducted by the *American Psychological Association* and the *Council of Graduate Departments of Psychology* reports on data submitted by 317 departments covering 5,516 full-time faculty in U.S. departments of psychology. The 1980 survey finds that the salaries of full-time psychology faculty in doctoral departments ranges from $33,792 for full professor with at least 12 years of experience to $15,400 for a lecturer or instructor with less than three years of experience. Faculty generally earn more at doctoral departments of psychology when they are working in the Northeast section (especially true at the higher ranks) and less in the southeast section of the country (Table 155). Table 156 presents similar data for psychology faculty employed in master's departments.

The type of psychology department employing a faculty member is a factor in salary determination, but no clear trend is evident. Salaries of psychology faculty by type of psychology department, rank and years in rank are shown in Table 157.

Regardless of geographic location or departmental specialty, the 1980 survey found the median annual salary of a full professor with at least 12 years of experience was $32,014, while a lecturer or instructor with less than three years of experience earned $14,980 (Table 158).

In addition to the graduate department survey conducted by the *American Psychological Association*, in 1981 the APA began a "first of a kind" salary survey of a sample of 20,000 members of the association, with a response rate of 65%. The survey found that faculty employed in university psychology departments earned more, regardless of rank, than those employed in four-year colleges. This was particularly evident in the salaries of full professors (Table 159).

• The 24th annual salary survey of the *American Mathematical Society* is based on 703 returns from 867 departments in the mathematical sciences. Table 160 shows that doctoral mathematics teachers employed in doctorate granting departments earn more than those employed in departments not granting the doctorate. Additionally, the more prestigious the doctoral granting department, generally the higher salaries paid the faculty (Table 160). As would be expected, non-doctoral degree mathematics teachers earn less than those with a doctorate regardless of type of institution (Table 161).

• A survey of salaries paid to chemical engineering faculty has been a continuing activity of the *American Institute of Chemical Engineers*. The 1979-80 survey finds that overall, regardless of rank, faculty in chemical engineering departments earned more when working in the west south central region of the U.S. and less when employed in the east south central, (Table 162).

• The *American Chemical Society* salary survey found that those chemists employed in colleges and universities earn less than those employed in other sectors of the economy. Not surprisingly, women reported consistently lower salaries than men regardless of years of experience or degree level (Table 163). Additional data from the survey which was analyzed by the *CHEMICAL AND ENGINEERING NEWS* finds that private institutions pay higher faculty salaries at all ranks than do public ones when the highest degree awarded by the institution is the doctorate, and generally pay higher when the highest degree granted is the master's. However, public institutions granting only the B.S. generally pay all ranks of faculty higher salaries than do private institutions in this category (Table 164).

• Inflation continues to erode salary increases gained by faculty and administrators in colleges of pharmacy in the U.S., according to the 1980-81 salary survey conducted by the *American Association of Colleges of Pharmacy*. Administrators in colleges of pharmacy earn more than professorial faculty. Professors reported an overall annual salary of $38,782, while deans averaged $48,531. Even the assistant/associate dean almost matched the salary of the full professor as shown in Table 165. By discipline, hospital pharmacy paid professors, associate professors and instructors higher salaries and pharmacy administration paid assistant professors the highest (Table 166).

• The *Engineering Manpower Commission* of the *American Association of Engineering Societies*, as part of its collection of data for the *PROFESSIONAL INCOME OF ENGINEERS* series, collects data on the *SALARIES OF ENGINEERS IN EDUCATION*. For the 1980 report, 291 educational institutions provided data covering 11,907 engineering faculty members. Tables 167 and 168 present salaries of engineering faculty by rank and selected years since baccalaureate for those on nine and twelve-month contracts respectively, while Table 169 presents similar information for faculty employed in technical schools. Not unexpectedly, faculty employed in engineering schools report higher salaries than do those in technical schools.

Engineering faculty employed in engineering schools offering the Ph.D. program earn higher salaries than do those employed in engineering schools with non-Ph.D. programs or in technical schools as shown in Table 170.

• Data collected by the *College and University Personnel Association* for its *1980-81 ADMINISTRATIVE COMPENSATION SURVEY* finds that salaries of academic administrators vary substantially for the same position in public and private institutions. In general, private institutions pay less than public ones and some academic deans earn substantially more than do chief administrators regardless of type of institution. As in previous years, heading the salary list is the dean of medicine with a median overall salary of $76,837. This compares with the median salary of $56,100 paid to the chief executive officer of a complete university system. Salaries paid to administrative officers in higher education by type of position and control of institution are shown in Table 171.

• The *National Education Association* in its *ESTIMATES OF SCHOOL STATISTICS* collects data on average annual salaries of elementary and secondary instructional staff by state. As was true in higher education, elementary and secondary school teachers and instructional staff receive the highest salaries when employed in Alaska, followed by those employed in the District of Columbia (Table 172).

SOURCE: American Association of University Professors, Selected Tables from the Annual Report on the Economic Status of the Profession, 1980-81.

Table 138

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY* AND TYPE OF AFFILIATION, 1980-81

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE INDEPENDENT		CHURCH-RELATED	
	Average Salary	% Increase over 1979-80	Average Salary	% Increase Over 1979-80	Average Salary	% Increase Over 1979-80	Average Salary	% Increase Over 1979-80
CATEGORY I								
Professor	$33,450	9.0%	$32,850	9.1%	$36,600	8.6%	$31,170	10.2%
Assoc. Professor	24,560	9.0	24,460	8.9	25,290	9.9	23,750	9.0
Ass't. Professor	19,850	9.2	19,810	9.2	20,170	9.6	19,370	9.1
Instructor	15,630	10.2	15,450	10.0	16,470	11.0	16,010	10.7
All Ranks	26,060	9.1	25,730	9.1	27,930	9.1	23,880	9.6
CATEGORY II-A								
Professor	29,000	8.3	29,580	8.0	28,710	8.6	24,930	10.2
Assoc. Professor	23,000	7.9	23,440	7.6	25,560	8.9	20,530	9.3
Ass't. Professor	18,930	8.2	19,280	7.9	18,580	9.0	17,220	8.9
Instructor	15,190	7.8	15,500	7.5	14,810	8.6	13,700	9.2
All Ranks	22,850	8.1	23,390	7.8	22,130	8.8	20,070	9.5
CATEGORY II-B								
Professor	24,970	9.1	26,780	8.7	27,030	9.4	22,540	9.0
Assoc. Professor	20,010	8.6	22,190	8.4	20,430	9.2	18,640	8.3
Ass't. Professor	16,750	8.7	18,7[illegible]0	9.0	16,720	8.9	15,810	8.4
Instructor	13,900	8.7	15,060	8.3	13,810	9.1	13,350	8.7
All Ranks	19,300	8.8	20,740	8.7	20,210	9.2	17,890	8.6
CATEGORY III								
Professor	25,920	8.1	26,200	8.0	23,750	8.2	17,720	11.7
Assoc. Professor	22,420	7.1	22,630	6.9	19,090	7.2	16,280	8.4
Ass't. Professor	18,830	8.6	19,090	9.2	14,390	7.8	14,130	8.8
Instructor	15,480	7.4	15,960	7.4	11,750	7.0	11,600	9.9
All Ranks	20,390	8.4	20,[illegible]10	7.9	16,010	8.4	14,440	9.6
CATEGORY IV								
No Rank	21,560	9.6	22,050	9.7	15,530	8.2	14,710	10.6

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions with academic rank; and Category IV - includes institutions without academic ranks.

SOURCE: American Association of University Professors, The Rocky Road Through the 1980's: Annual Report on the Economic Status of the Profession, 1980-81.

Table 139

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY*, TYPE OF AFFILIATION AND SEX, 1980-81

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE INDEPENDENT		CHURCH-RELATED	
	Men	Women	Men	Women	Men	Women	Men	Women
CATEGORY I								
Professor	$33,650	$30,500	$33,050	$30,160	$36,240	$32,310	$31,450	$27,950
Assoc. Professor	24,830	23,420	24,720	23,330	25,630	23,220	24,150	22,070
Ass't. Professor	20,260	18,990	20,230	18,950	20,480	19,400	19,970	18,260
Instructor	16,220	15,160	16,010	15,040	17,020	15,810	16,820	15,480
All Ranks	27,300	20,830	26,970	20,670	29,230	21,910	25,240	19,600
CATEGORY II-A								
Professor	29,090	28,250	29,650	28,980	29,030	25,930	25,080	23,330
Assoc. Professor	23,190	22,330	23,560	23,000	22,940	20,920	20,850	19,310
Ass't. Professor	19,230	18,440	19,520	18,900	19,070	17,620	17,640	16,460
Instructor	15,510	14,920	15,800	15,260	15,110	14,400	14,180	13,290
All Ranks	23,790	20,090	24,300	20,710	23,140	18,840	21,050	17,170
CATEGORY II-B								
Professor	25,090	24,100	26,930	25,680	27,130	26,350	22,690	21,480
Assoc. Professor	20,230	19,200	22,390	21,380	20,570	19,870	18,890	17,770
Ass't. Professor	17,040	16,270	18,990	18,210	16,950	16,310	16,050	15,420
Instructor	14,310	13,530	15,660	14,460	14,090	13,540	13,670	13,100
All Ranks	20,190	17,040	21,730	18,630	21,170	17,670	18,720	15,910
CATEGORY III								
Professor	25,990	25,250	26,260	25,560	24,650	17,580	17,890	15,910
Assoc. Professor	22,570	22,030	22,730	23,370	20,250	16,840	16,210	16,400
Ass't. Professor	19,040	18,510	19,280	18,810	15,490	14,110	13,790	14,520
Instructor	15,830	15,130	16,310	15,620	12,010	11,500	11,380	11,760
All Ranks	21,150	19,000	21,440	19,450	17,510	13,670	15,000	13,640
CATEGORY IV								
No Rank	22,380	22,870	16,470	15,600	20,130	20,660	13,860	13,040

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions with academic rank; and Category IV - includes institutions without academic ranks.

SOURCE: American Association of University Professors, Supplementary Tables to the Annual Report on the Economic Status of the Profession, 1980-81.

Table 140

WEIGHTED AVERAGE FACULTY SALARIES BY ACADEMIC RANK, CATEGORY* AND GEOGRAPHIC REGION, 1980-81
(Standard Academic Year Basis)

ACADEMIC RANK	WEST		NORTH CENTRAL		NORTHEAST		SOUTH		
	Pacific	Mountain	West North Central	East North Central	Middle Atlantic	New England	West South Central	East South Central	South Atlantic
CATEGORY I									
Professor	$36,200	$31,100	$31,180	$33,350	$35,850	$35,310	$30,950	$30,320	$31,360
Assoc. Professor	25,270	23,940	23,660	24,760	25,870	24,730	23,690	23,570	23,610
Ass't. Professor	20,620	19,710	19,440	20,150	20,060	19,700	19,300	19,240	19,580
Instructor	16,480	16,410	15,330	15,660	15,930	16,410	15,010	14,970	16,620
All Ranks	28,770	25,160	25,020	26,370	27,470	27,280	24,070	23,690	24,720
CATEGORY II-A									
Professor	31,770	25,820	26,270	27,830	30,560	28,420	26,360	25,680	27,820
Assoc. Professor	24,340	22,050	21,730	22,840	24,180	22,450	22,080	21,720	22,670
Ass't. Professor	19,750	18,570	18,490	18,890	19,470	18,850	18,720	18,000	19,040
Instructor	16,580	15,400	15,040	15,670	15,320	15,480	15,010	15,060	15,150
All Ranks	26,480	21,890	21,060	22,480	23,900	22,480	20,950	20,400	21,820
CATEGORY II-B									
Professor	27,230	26,190	23,520	24,720	27,300	28,310	21,250	20,970	24,060
Assoc. Professor	21,360	21,020	19,270	19,860	21,490	20,440	18,890	17,340	19,740
Ass't. Professor	17,950	17,840	16,330	16,620	17,180	17,150	16,720	14,740	16,840
Instructor	15,340	14,830	14,070	13,980	14,560	14,300	13,620	12,680	13,690
All Ranks	21,570	20,900	18,440	19,560	20,490	20,690	17,790	16,810	18,890
CATEGORY III									
Professor	28,470	22,310	25,440	26,690	27,050	24,420	22,740	20,820	25,090
Assoc. Professor	27,770	20,580	21,640	23,410	23,470	20,780	20,460	19,650	21,120
Ass't. Professor	23,810	18,620	17,650	20,100	19,660	17,700	17,770	17,100	17,710
Instructor	19,060	15,680	14,810	16,780	15,010	13,740	16,290	15,790	14,830
All Ranks	26,020	18,610	19,170	21,220	21,460	19,650	18,840	17,460	19,200
CATEGORY IV									
No Rank	26,800	20,750	18,270	21,720	16,180	15,210	18,580	16,540	16,980
ALL CATEGORIES EXCEPT IV									
Professor	33,340	30,120	28,610	30,930	32,320	31,750	28,430	27,640	30,270
Assoc. Professor	24,760	23,300	22,110	23,460	24,260	22,960	22,440	22,000	23,010
Ass't. Professor	20,220	19,290	18,250	19,310	19,260	18,750	18,700	18,090	18,890
Instructor	16,850	16,000	14,840	15,640	15,210	15,080	15,070	14,880	14,940
All Ranks	27,210	24,170	22,230	24,050	24,330	24,000	21,950	21,330	22,750

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions; and Category IV - includes institutions without academic ranks.

NOTE: Figure for all ranks includes lecturers.

SOURCE: American Association of University Professors, Supplementary Tables to the Annual Report on the Economic Status of the Profession, 1980-81.

Table 141

WEIGHTED AVERAGE FACULTY COMPENSATION BY REGION, CATEGORY* AND ACADEMIC RANK, 1980-81
(Standard Academic Year Basis)

ACADEMIC RANK	WEST		NORTH CENTRAL		NORTHEAST		SOUTH		
	Pacific	Mountain	West North Central	East North Central	Middle Atlantic	New England	West South Central	East South Central	South Atlantic
CATEGORY I									
Professor	$44,400	$35,910	$36,590	$39,540	$43,280	$41,530	$36,070	$34,260	$36,650
Assoc. Professor	31,170	27,980	27,940	29,560	31,280	29,020	27,970	26,890	27,710
Ass't. Professor	25,390	23,150	23,120	24,040	24,110	22,980	22,810	21,860	22,590
Instructor	19,970	19,480	18,300	18,530	19,230	18,920	17,560	16,990	18,300
All Ranks	35,430	29,290	29,500	31,350	33,150	32,000	28,260	26,890	28,780
CATEGORY II-A									
Professor	39,770	29,970	29,870	33,200	36,880	32,830	30,460	29,420	31,910
Assoc. Professor	30,470	25,640	24,950	27,520	29,390	26,130	25,720	24,910	26,020
Ass't. Professor	24,460	21,660	21,220	22,830	23,580	21,830	21,820	20,550	21,860
Instructor	19,960	18,110	17,120	18,950	18,550	17,800	17,590	17,110	17,410
All Ranks	33,070	25,460	25,460	27,030	28,950	26,050	24,370	23,330	25,050
CATEGORY II-B									
Professor	32,850	31,130	27,510	29,920	32,830	33,600	24,420	24,580	27,780
Assoc. Professor	25,730	24,920	22,390	23,720	25,760	24,040	21,830	20,050	22,780
Ass't. Professor	21,650	21,250	18,690	19,560	20,310	20,010	19,140	16,810	19,380
Instructor	18,560	17,890	16,000	16,010	17,130	16,360	15,470	14,290	15,610
All Ranks	26,020	24,850	21,310	23,310	24,340	24,310	20,420	19,400	21,760
CATEGORY III									
Professor	32,990	26,380	27,060	31,020	32,730	27,960	26,610	23,790	28,480
Assoc. Professor	32,350	24,460	23,670	27,430	28,450	24,210	23,920	22,490	23,940
Ass't. Professor	28,030	22,370	20,190	23,700	23,950	20,480	20,740	19,550	20,030
Instructor	22,660	18,650	17,100	19,810	18,240	15,390	18,990	17,790	16,810
All Ranks	30,380	22,170	21,380	24,910	26,060	22,670	22,030	19,870	21,760
CATEGORY IV									
No Rank	31,420	24,410	21,110	25,820	19,220	17,030	21,220	18,050	19,500
ALL CATEGORIES EXCEPT IV									
Professor	41,250	34,870	33,260	36,760	39,010	37,310	33,030	31,470	34,420
Assoc. Professor	30,660	27,260	25,770	28,040	29,370	26,850	26,300	25,190	26,310
Ass't. Professor	24,890	22,690	21,230	23,040	23,310	21,800	21,900	20,610	21,600
Instructor	20,280	19,030	17,150	18,500	18,310	17,230	17,580	16,860	17,090
All Ranks	33,650	28,200	25,850	28,650	29,390	28,000	25,640	24,320	25,970

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions with academic ranks; and Category IV - includes institutions without academic ranks.

NOTE: Figure for all ranks includes lecturers.

SOURCE: American Association of University Professors, Supplementary Tables to the Annual Report on the Economic Status of the Profession, 1980-81.

Table 142

WEIGHTED AVERAGE FACULTY SALARIES BY ACADEMIC RANK AND STATE, 1980-81
(Standard Academic Year Basis)

STATE	ACADEMIC RANK				
	Professor	Associate Professor	Assistant Professor	Instructor	All Ranks
Alabama	$29,230	$23,300	$18,930	$15,860	$21,980
Alaska	45,300	37,340	29,920	24,460	35,000
Arizona	34,360	26,090	21,170	16,630	27,070
Arkansas	26,400	21,130	17,910	14,140	20,640
California	34,320	25,430	20,660	17,330	28,300
Colorado	28,740	22,380	18,870	15,400	23,750
Connecticut	33,230	23,520	19,400	16,390	24,970
Delaware	34,220	24,250	18,820	15,830	23,980
District of Columbia	32,570	24,540	19,900	16,390	24,800
Florida	29,230	21,990	18,580	14,380	22,520
Georgia	30,640	23,110	19,160	15,410	22,840
Hawaii	33,130	23,740	19,090	15,150	25,510
Idaho	25,310	21,030	17,640	16,100	20,760
Illinois	31,250	23,550	19,650	16,110	24,130
Indiana	30,060	22,830	18,370	13,800	23,260
Iowa	28,880	22,020	18,280	14,700	22,190
Kansas	28,200	21,690	17,650	14,150	21,830
Kentucky	27,520	21,880	18,280	14,720	21,760
Louisiana	28,650	23,170	19,310	15,320	22,120
Maine	27,040	20,530	16,600	13,710	20,540
Maryland	32,300	25,090	20,190	15,750	24,300
Massachusetts	32,500	23,480	18,990	14,930	24,570
Michigan	31,870	24,110	19,870	16,060	25,130
Minnesota	30,110	22,570	18,940	15,660	23,410
Mississippi	27,270	22,090	18,160	14,310	21,210
Missouri	29,030	22,790	18,560	15,050	22,560
Montana	25,110	20,560	17,330	15,000	20,840
Nebraska	27,300	21,650	17,620	14,100	21,500
Nevada	30,820	24,360	20,200	16,490	24,920
New Hampshire	27,910	21,100	18,860	14,580	21,510
New Jersey	34,650	25,570	19,860	15,700	25,010
New Mexico	30,880	23,270	19,060	15,790	23,500
New York	32,450	24,130	19,160	14,970	24,350
North Carolina	30,750	23,270	19,040	14,840	23,260
North Dakota	25,920	21,740	18,300	14,970	21,060
Ohio	30,570	23,430	19,030	15,450	23,630
Oklahoma	28,200	22,680	19,380	15,590	22,480
Oregon	28,120	22,090	18,260	15,570	22,730
Pennsylvania	31,280	23,960	19,140	15,290	24,020
Rhode Island	31,240	23,320	19,020	15,360	24,470
South Carolina	29,150	22,490	18,090	14,390	21,700
South Dakota	24,010	19,880	16,800	14,430	19,390
Tennessee	27,350	21,450	17,530	14,560	20,930
Texas	28,860	22,420	18,480	15,020	22,050
Utah	30,600	23,300	19,190	15,860	24,500
Vermont	27,810	21,110	17,350	14,220	21,220
Virginia	29,510	22,610	18,430	14,630	21,830
Washington	30,010	22,940	19,150	15,500	24,590
West Virginia	25,590	20,680	17,280	14,100	19,890
Wisconsin	30,250	23,060	19,330	15,910	23,880
Wyoming	32,680	25,850	20,960	17,590	26,360
Entire USA	30,870	23,290	18,980	15,150	23,650

SOURCE: American Association of University Professors, The Rocky Road through the 1980's: Annual Report on the Economic Status of the Profession, 1980-81.

Table 143

AVERAGE SALARY, FRINGE BENEFITS AND COMPENSATION OF FULL-TIME FACULTY MEMBERS IN INSTITUTIONS OF HIGHER EDUCATION BY RANK, 1980-81

ACADEMIC RANK	Average Salary	Average Fringe Benefits	Average Compensation	Fringe Benefits (As a % of Average)	
				Salary	Compensation
Professor	$30,870	$5,660	$36,530	18.4 %	15.5%
Associate Professor	23,290	4,280	27,570	18.4	15.6
Assistant Professor	18,980	3,390	22,370	17.9	15.2
Instructor	15,150	2,550	17,700	16.8	14.4
Lecturer	17,170	3,630	20,800	21.1	17.5
All Ranks	23,650	4,300	27,950	18.2	15.4
No Rank*	21,580	3,550	25,130	16.5	14.1

* Institutions without professorial ranks.

SOURCE: Preliminary Data, National Center for Education Statistics.

Table 144

NUMBER AND AVERAGE SALARY OF FULL-TIME INSTRUCTIONAL FACULTY IN HIGHER EDUCATION ON 9-MONTH CONTRACTS BY TYPE OF INSTITUTION, RANK AND SEX, 1980-81

RANK AND SEX	TOTAL		TYPE OF INSTITUTION		
	No. of Faculty	Salary	Univer-sities	4-Year Colleges	2-Year Colleges
All Ranks	300,635	$23,169	$25,733	$22,056	$21,828
Men	220,449	24,355	26,990	23,082	22,676
Women	80,186	19,906	20,668	19,236	20,363
Professor	78,899	30,566	33,319	28,626	25,676
Men	70,586	30,881	33,516	28,838	25,978
Women	8,313	27,798	30,535	27,142	24,776
Associate Professor	75,143	23,085	24,288	22,374	22,570
Men	59,700	23,333	24,514	22,591	22,829
Women	15,443	22,126	23,219	21,554	22,000
Assistant Professor	75,723	18,811	19,645	18,279	19,014
Men	49,115	19,122	20,009	18,527	19,302
Women	26,608	18,236	18,852	17,842	18,603
Instructor	22,967	15,184	15,404	14,923	15,645
Men	10,798	15,563	15,794	15,291	16,082
Women	12,169	14,848	15,080	14,636	15,222
Lecturer	4,341	16,898	17,434	16,521	14,277
Men	2,360	17,992	18,617	17,503	15,155
Women	1,981	15,592	16,055	15,277	13,521
No Academic Rank	43,562	22,342	16,515	17,408	22,605
Men	27,890	23,186	17,991	18,067	23,459
Women	15,672	20,840	14,798	16,058	21,090

SOURCE: Preliminary Data, National Center for Education Statistics.

Table 145

NUMBER AND AVERAGE SALARY OF FULL-TIME INSTRUCTIONAL FACULTY IN HIGHER EDUCATION ON 12-MONTH CONTRACTS BY TYPE OF INSTITUTION, RANK AND SEX, 1980-81

ALL INSTITUTIONS	TOTAL		TYPE OF INSTITUTION		
	No. of Faculty	Salary	Univer-sities	4-Year Colleges	2-Year Colleges
Total	50,590	$27,281	$32,804	$25,826	$20,988
Men	37,703	29,179	34,122	27,650	21,828
Women	12,887	21,730	25,929	21,185	19,481
Professor	13,763	37,466	40,229	34,135	27,639
Men	12,681	37,850	40,372	34,538	28,020
Women	1,082	32,963	37,579	30,865	26,057
Associate Professor	10,467	29,118	31,498	27,562	24,374
Men	8,474	29,635	31,637	28,241	24,752
Women	1,993	26,920	30,684	25,175	23,365
Assistant Professor	10,035	23,887	25,954	22,719	19,954
Men	6,837	24,784	26,623	23,709	20,150
Women	3,198	21,969	23,993	21,097	19,550
Instructor	4,443	17,827	19,634	17,209	17,333
Men	2,231	18,562	20,782	17,767	18,009
Women	2,212	17,087	18,463	16,684	16,510
Lecturer	704	21,975	23,242	20,179	18,941
Men	369	24,520	25,406	22,378	21,197
Women	335	19,171	20,213	18,091	17,136
Not Ranked	11,178	20,161	19,269	17,133	20,682
Men	7,111	20,969	19,889	18,208	21,493
Women	4,067	18,747	18,245	14,821	19,307

SOURCE: Preliminary Data, National Center for Education Statistics, April 13, 1981 and Faculty Salaries, Tenure and Benefits, 1979-80.

Table 146

AVERAGE SALARY OF FULL-TIME INSTRUCTIONAL FACULTY ON 9-MONTH CONTRACTS IN HIGHER EDUCATION BY INSTITUTIONAL CONTROL AND ACADEMIC RANK, 1979-80 AND 1980-81

ACADEMIC RANK	ALL INSTITUTIONS			PUBLIC INSTITUTIONS			PRIVATE INSTITUTIONS		
	1979-80	1980-81	% Change	1979-80	1980-81	% Change	1979-80	1980-81	% Change
Professor	$28,368	$30,556	7.7	$28,756	$30,915	7.5	$27,463	$29,716	8.2
Associate Professor	21,424	23,085	7.8	22,002	23,616	7.3	19,973	21,825	9.3
Assistant Professor	17,447	18,811	7.8	17,958	19,315	7.6	16,295	17,764	9.0
Instructor	13,991	15,184	8.6	14,409	15,613	8.4	12,977	14,180	9.3
Lecturer	16,146	16,898	4.7	16,590	17,159	3.4	14,197	15,934	12.2
No Academic Rank	20,463	22,342	9.2	20,904	22,774	8.9	14,343	16,017	11.7
All Ranks Combined	21,340	23,169	8.6	21,771	23,608	8.4	20,139	21,979	9.1

SOURCE: National Center for Education Statistics, Faculty Salaries, Tenure and Benefits, 1979-80, September 1980.

Table 147

NUMBER AND AVERAGE SALARIES OF FULL-TIME INSTRUCTIONAL FACULTY ON 9-10 MONTH CONTRACTS IN ALL INSTITUTIONS OF HIGHER EDUCATION BY STATE, ACADEMIC RANK AND SEX, 1979-80

STATE OR OTHER AREA	TOTAL FACULTY*		ACADEMIC RANK									
			Professor		Associate Professor		Assistant Professor		Instructor		Lecturer	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Alabama	4,040	1,987	$24,715	$22,412	$20,176	$18,236	$16,748	$15,909	$13,477	$13,070	$12,148	$10,644
Alaska	217	70	37,387	36,629	30,957	29,440	24,340	24,072	19,878	20,148		
Arizona	2,716	775	33,095	28,767	24,630	23,252	19,978	18,605	15,773	15,274	18,977	15,439
Arkansas	2,004	721	23,837	22,330	19,144	17,125	16,442	15,656	13,758	13,301	12,097	12,721
California	28,966	9,195	31,527	29,140	23,311	22,616	18,996	18,559	16,734	15,896	19,666	18,902
Colorado	3,538	890	26,759	24,431	20,735	19,494	17,504	16,325	13,807	13,360	16,470	15,511
Connecticut	4,266	1,372	31,320	26,620	21,999	20,768	18,217	17,398	15,199	14,483	16,056	14,499
Delaware	744	272	32,662	24,934	22,972	21,087	17,776	16,882	14,609	14,355	14,036	13,709
District of Columbia	1,832	715	30,830	28,237	23,070	22,142	18,346	18,318	15,624	15,026		13,750
Florida	8,192	2,925	26,156	23,131	19,905	19,130	16,582	16,046	13,936	13,858	16,172	14,915
Georgia	5,374	2,225	26,881	22,788	20,852	18,994	17,220	16,240	13,724	13,507	15,604	13,198
Hawaii	1,252	454	31,190	28,358	22,271	21,573	17,637	17,357	13,582	14,571		
Idaho	930	253	24,330	23,241	20,109	19,125	16,800	15,939	15,541	13,766		
Illinois	14,604	4,947	29,298	25,420	21,876	21,185	18,333	17,541	15,1[illegible]	14,500	16,626	13,577
Indiana	6,532	1,917	26,705	24,160	20,697	19,417	16,900	16,008	13,374	12,234	16,293	13,161
Iowa	3,612	1,073	25,987	22,466	20,127	19,147	16,777	16,133	14,136	13,279	18,133	9,690
Kansas	3,056	890	25,917	22,852	20,142	18,677	16,696	15,623	13,653	12,972	14,192	14,244
Kentucky	3,976	1,453	24,721	22,524	19,441	17,946	16,602	15,396	13,862	12,860	14,516	11,512
Louisiana	4,464	1,776	25,457	22,666	20,378	19,595	17,598	16,632	14,009	13,783	11,250	10,833
Maine	1,167	311	24,952	20,991	19,122	18,047	15,518	14,589	12,565	12,151	15,012	12,450
Maryland	4,560	2,103	29,167	26,255	22,402	21,378	18,402	17,844	14,713	14,330	14,996	13,922
Massachusetts	9,920	3,398	30,870	26,851	22,151	21,023	17,968	17,174	14,516	13,979	17,886	14,032
Michigan	10,384	3,111	29,186	26,178	22,037	21,140	18,359	17,410	15,252	14,279	16,778	13,892
Minnesota	4,551	1,276	27,532	25,133	20,959	20,085	17,549	16,791	14,685	13,920	13,290	12,875
Mississippi	2,216	962	24,163	21,238	19,834	18,145	16,359	15,756	13,028	12,737	11,779	13,211
Missouri	5,417	1,742	26,341	23,308	20,881	19,431	17,083	16,152	13,761	13,419	14,041	11,942
Montana	1,187	259	23,698	22,199	19,535	19,282	16,526	15,584	14,234	14,521	17,622	12,727
Nebraska	2,323	684	25,241	22,750	20,004	18,997	16,322	16,045	12,883	12,461	9,726	12,569
Nevada	580	164	29,482	29,898	23,192	22,785	19,154	18,378	17,028	17,289	21,110	19,226

*Includes all faculty on 9-10 month and 12 month contracts.

SOURCE: National Center for Education Statistics, Faculty Salaries, Tenure and Benefits, 1979-80, September 1980.

Table 147 (continued)

NUMBER AND AVERAGE SALARIES OF FULL-TIME INSTRUCTIONAL FACULTY ON 9-10 MONTH CONTRACTS IN ALL INSTITUTIONS OF HIGHER EDUCATION BY STATE, ACADEMIC RANK AND SEX, 1979-80

STATE OR OTHER AREA	TOTAL FACULTY*		ACADEMIC RANK									
			Professor		Associate Professor		Assistant Professor		Instructor		Lecturer	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
New Hampshire	1,305	398	$26,367	$21,324	$19,675	$18,854	$16,341	$15,543	$13,437	$12,450	$15,820	$13,589
New Jersey	6,740	2,677	31,075	28,962	23,439	22,681	18,527	18,060	14,747	14,346	16,968	15,608
New Mexico	1,526	432	27,937	24,573	20,982	19,694	17,332	15,966	13,966	13,743	15,459	14,095
New York	24,648	8,767	30,816	28,604	23,383	22,739	18,626	18,119	14,566	13,885	18,283	17,324
North Carolina	6,298	2,512	26,648	22,441	20,428	19,037	17,012	16,369	13,690	13,137	16,293	13,789
North Dakota	919	269	24,489	22,509	20,534	19,530	17,156	16,302	15,066	13,475	12,799	12,789
Ohio	10,384	3,258	27,785	24,717	21,366	20,194	17,374	16,563	14,102	13,851	14,768	13,488
Olkahoma	3,274	1,165	25,193	23,136	20,818	19,357	17,857	16,855	14,283	13,542	15,367	11,964
Oregon	3,615	1,106	26,349	24,104	20,791	20,082	17,356	16,671	14,564	14,028	17,397	13,780
Pennsylvania	8,501	2,648	29,182	25,838	22,331	21,114	17,955	17,068	14,619	13,636	16,300	14,262
Rhode Island	951	395	29,111	26,630	21,972	20,896	17,877	17,409	15,045	13,826	18,475	15,850
South Carolina	4,583	1,806	26,938	22,717	20,915	19,034	17,039	16,016	13,056	13,271	17,705	12,259
South Dakota	782	211	21,967	20,815	18,153	17,698	15,578	14,902	13,603	12,886	15,000	11,009
Tennessee	3,750	1,416	25,854	22,613	20,397	19,069	16,793	16,102	13,793	13,592	13,360	12,071
Texas	11,450	4,080	26,854	23,838	20,963	19,838	17,511	16,884	14,281	13,942	14,996	13,637
Utah	1,825	401	27,730	25,307	21,181	20,204	17,929	16,534	15,080	14,187	18,845	12,055
Vermont	574	184	25,112	21,672	18,882	17,910	15,959	15,080	13,323	12,875	15,244	14,095
Virginia	5,881	2,146	27,536	22,999	20,885	18,913	17,036	16,029	13,544	13,089	15,475	13,823
Washington	4,659	1,418	27,871	25,658	21,082	20,289	17,790	16,771	14,693	13,451	17,881	16,127
West Virginia	1,845	704	23,747	21,742	19,448	18,252	16,399	15,595	13,501	12,886	10,827	9,823
Wisconsin	4,482	1,064	28,181	26,209	21,201	20,607	17,913	17,347	15,061	14,403	15,962	14,257
Wyoming	791	228	30,340	28,224	23,508	24,086	19,567	18,729	17,072	15,923	16,955	13,428
50 States & D.C.	194,972	66,080	28,653	25,910	21,627	20,642	17,712	16,971	14,321	13,749	16,987	15,142
Canal Zone	20	5	31,772		31,441		29,669		26,803			
Guam	100	57	24,173	24,540	20,222	21,309	17,990	17,858	15,170	15,552		
Puerto Rico	1,418	1,199	24,315	21,446	18,853	16,070	15,684	14,399	12,864	12,105	12,597	12,000
Pac. Is., Virgin Is.	40	23	23,646	22,335	20,814	20,344	17,151	16,791	13,338	13,978	14,760	
Outlying Areas Total	1,578	1,284	24,345	21,565	19,039	16,297	16,138	14,692	13,390	12,502	12,958	12,000
Aggregate U.S.	197,224	67,400	28,656	25,864	21,636	20,576	17,708	16,946	14,297	13,714	16,978	15,141

*Includes all faculty on 9-10 month and 12 month contracts.

SOURCE: The Chronicle of Higher Education and John Minter Associates, Faculty Salaries 1980-81 and Additional Earnings 1979-80.

Table 148

AVERAGE AND MEDIAN SALARIES OF FACULTY MEMBERS BY FIELD AND SEX, 1980-81

FIELD	Average		Median	
	Men	Women	Men	Women
Arts, Fine and Applied	$22,675	$19,735	$22,138	$19,600
Business and Economics	25,152	20,030	25,000	18,500
Engineering & Computer Sci.	26,997		25,450	
Humanities, Language, Literature & Communications	23,791	19,842	22,500	18,375
Physical Education	22,235	19,892	21,146	19,300
Science & Mathematics	24,395	19,084	23,205	19,034
Social Sciences	25,236	20,567	25,000	19,500
Vocational Education, Home Economics, Nursing & Health	21,321	19,902	20,178	19,000

Table 149

AVERAGE AND MEDIAN ANNUAL EARNINGS ABOVE BASE SALARY OF FACULTY MEMBERS BY FIELD AND SEX, 1979-80

FIELD	Average		Median	
	Men	Women	Men	Women
Arts, Fine and Applied	$3,607	$2,381	$2,364	$1,825
Business and Economics	9,119	4,526	6,500	4,000
Engineering & Computer Sci.	8,478		6,222	
Humanities, Language, Literature & Communications	3,110	2,184	2,330	2,400
Physical Education	4,012	2,444	3,250	1,900
Science and Mathematics	4,537	1,992	3,900	2,000
Social Sciences	5,454	3,232	4,328	2,975
Vocational Education, Home Economics, Nursing & Health	4,711	2,119	3,200	1,725

SOURCES: The Chronicle of Higher Education, November 3, 1980 and John Minter Associates, Faculty Salaries 1980-81 and Additional Earnings 1979-80.

Table 150

AVERAGE AND MEDIAN SALARIES OF FACULTY MEMBERS BY AGE GROUP, SEX AND RACE, 1980-81

AGE GROUP	Men		Women		Non-White	
	Average	Median	Average	Median	Average	Median
35 or Under	$19,099	$18,775	$17,243	$16,500	$19,204	$18,750
36-45	23,166	22,800	19,752	19,305	21,486	20,800
46-55	26,569	25,700	22,529	21,003	26,333	25,093
56-65	28,501	28,000	22,328	22,359		

Table 151

AVERAGE AND MEDIAN SALARIES FOR FACULTY MEMBERS ON 9-10 MONTH CONTRACTS BY FIELD AND RANK, 1980-81

FIELD	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR	
	Average	Median	Average	Median	Average	Median
Arts, Fine and Applied	$27,979	$27,255	$22,846	$22,263	$16,770	$16,404
Business and Economics	30,349	30,250	25,872	25,750	20,737	20,300
Engineering and Computer Science	31,305	31,609	24,769	25,125	21,634	21,500
Humanities, Language, Literature, Communications	29,108	28,000	21,112	21,900	17,724	17,520
Physical Education	27,566	26,251	22,196	21,565	18,291	18,750
Science and Mathematics	28,570	28,000	22,650	22,200	18,705	18,419
Social Sciences	29,606	28,562	22,434	22,253	18,140	18,000
Vocational Education, Home Economics, Nursing and Health			21,909	21,500	18,267	18,600

Table 152

AVERAGE SALARIES OF FACULTY MEMBERS BY FIELD AND TYPE OF INSTITUTION, 1980-81

FIELD	TYPE OF INSTITUTION					
	All Institutions	All Public	All 4-Year	4-Year Public	4-Year Private	2-Year Public
Arts, Fine and Applied	$21,942	$22,049	$21,873	$21,970	$21,589	$
Business and Economics	24,924	25,265	25,383	25,982	23,940	21,615
Engineering and Computer Science	26,601	26,087	26,861	26,425	27,751	
Humanities, Language, Literature, Communications	22,847	24,151	22,953	24,494	19,181	21,842
Physical Education	20,850	21,643	20,707	21,564	18,711	
Science and Mathematics	24,451	24,859	24,662	25,281	23,577	22,942
Social Sciences	24,377	24,516	24,553	24,788	24,046	21,974
Vocational Education, Home Economics, Nursing and Health	20,596	21,102	20,406	21,083	18,532	21,141

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323.

Table 153

NUMBER AND MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED BY EDUCATIONAL INSTITUTIONS BY FIELD, 1975-79

FIELD	1975				1977				1979			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
TOTAL	149,184	100.0	58.3	$21,400	163,[illegible]40	100.0	57.4	$23,700	173,966	100.0	55.4	$26,400
Physical Scientists	25,681	17.2	47.0	21,100	27,[illegible]9	16.6	47.1	23,600	27,248	15.7	45.3	26,500
Chemists	14,229	9.5	39.7	20,600	14[illegible]	9.1	39.6	22,800	15,134	8.7	38.2	25,400
Physicists/Astronomers	11,452	7.7	60.8	22,000	1[illegible]	7.5	61.0	24,400	12,114	7.0	58.8	27,700
Mathematical Scientists	11,733	7.9	86.0	20,500	1[illegible]	7.5	83.8	22,700	12,606	7.2	82.4	25,500
Mathematicians	10,423	7.0	87.6	20,400	11,[illegible]	6.8	85.6	22,600	10,794	6.2	83.5	25,300
Statisticians	1,310	0.9	75.2	22,200	1,210	0.7	70.6	23,200	1,812	1.0	76.6	26,700
Computer Specialists	1,700	1.1	48.6	22,700	2,128	1.3	36.9	24,400	2,457	1.4	36.5	25,400
Environmental Scientists	5,976	4.0	49.3	21,000	6,312	3.9	48.5	23,600	6,182	3.6	42.3	26,700
Earth Scientists	4,619	3.1	48.5	20,900	4,641	2.8	47.5	23,400	4,654	2.7	41.8	26,700
Oceanographer	800	0.5	62.6	19,600	971	0.6	62.1	23,600	789	0.5	47.5	26,700
Atmospheric Scientists	557	0.4	42.3	23,100	700	0.4	41.2	25,200	739	0.4	41.0	27,300
Engineers	14,903	10.0	35.1	23,600	15,911	9.8	35.3	26,500	17,04[illegible]	9.8	33.9	30,000
Life Scientists	43,792	29.4	67.2	20,900	47,475	29.1	66.0	23,500	52,207	30.0	65.2	26,400
Biological Scientists	28,893	19.4	73.9	20,400	30,833	18.9	73.1	22,800	32,998	19.0	72.1	25,200
Agricultural Scientists	7,840	5.3	60.7	21,000	8,331	5.1	58.3	23,700	8,51[illegible]	4.9	56.5	27,500
Medical Scientists	7,059	4.7	53.5	24,100	8,311	5.1	53.7	25,800	10,699	6.2	55.5	29,900
Psychologists	17,703	11.9	58.9	21,000	18,581	11.4	55.1	22,700	19,949	11.5	52.5	25,600
Social Scientists	27,696	18.6	80.3	21,200	33,412	20.5	78.2	23,100	36,269	20.8	74.6	25,400
Economists	6,915	4.6	70.0	22,800	7,498	4.6	69.5	25,100	7,679	4.4	65.5	28,300
Sociologists/Anthropologists	7,354	4.9	92.7	20,500	8,547	5.2	90.0	22,100	8,787	5.1	85.9	23,900
Other Social Scientists	13,427	9.0	80.5	20,400	17,367	10.6	77.3	22,700	19,803	11.4	74.2	24,900

NOTES: Percents may not add to 100 because of rounding.
Median salaries computed for full-time employed civilians only.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1979, NSF 80-323

Table 154

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1979

FIELD AND SALARY BASE	TOTAL	ACADEMIC RANK					
		Professor	Associate Professor	Assistant Professor	Instructor	Other	No Report
ALL FIELDS							
Academic Year	$21,300	$26,800	$20,400	$16,600	$13,600	$16,000	$18,300
Calendar Year	27,100	32,900	25,800	21,700	18,600	22,600	
PHYSICAL SCIENTISTS							
Academic Year	21,500	25,700	20,100	16,000			
Calendar Year	27,800	33,000	24,000	20,900		24,500	
CHEMISTS							
Academic Year	20,800	25,400	19,800	15,800			
Calendar Year	27,600	31,800	23,800	20,300			
PHYSICISTS/ASTRONOMERS							
Academic Year	22,200	26,100	20,300	16,200			
Calendar Year	28,100	33,700	24,300				
MATHEMATICAL SCIENTISTS							
Academic Year	21,300	26,900	20,400	16,400			
Calendar Year	24,400	31,000	21,000	16,800			
MATHEMATICIANS							
Academic Year	21,400	26,800	20,400	16,200			
Calendar Year	22,900	30,200	20,500	16,600			
STATISTICIANS							
Academic Year	20,700	27,700	20,600	17,200			
Calendar Year							
COMPUTER SPECIALISTS							
Academic Year	20,000	28,500	20,500	17,200			
Calendar Year	23,500						
ENVIRONMENTAL SCIENTISTS							
Academic Year	21,800	26,100	20,900	16,800			
Calendar Year	27,900	33,300	28,800				
EARTH SCIENTISTS							
Academic Year	21,700	25,500	20,800	16,900			
Calendar Year	28,400	30,100					
OCEANOGRAPHERS							
Academic Year	30,300						
Calendar Year							

NOTE: Includes individuals reporting Teaching as their primary or secondary work activity. All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, *Characteristics of Doctoral Scientists and Engineers in the United States, 1979*. NSF 80-323

Table 154 (continued)

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1979

FIELD AND SALARY BASE	ACADEMIC RANK						
	TOTAL	Professor	Associate Professor	Assistant Professor	Instructor	Other	No Report
ENGINEERS							
Academic Year	$24,200	$28,400	$22,100	$18,600			
Calendar Year	$29,200	34,800	27,000	24,300			
LIFE SCIENTISTS							
Academic Year	20,000	25,800	19,500	16,500			
Calendar Year	27,700	33,600	27,400	22,400		22,200	
BIOLOGICAL SCIENTISTS							
Academic Year	19,800	25,700	19,400	16,200			
Calendar Year	26,500	34,100	27,300	22,100		22,100	
AGRICULTURAL SCIENTISTS							
Academic Year	24,000	26,000					
Calendar Year	27,700	36,500	25,700	20,300			
MEDICAL SCIENTISTS							
Academic Year	22,000	29,200	21,300	18,600			
Calendar Year	29,700	41,500	29,100	23,900			
PSYCHOLOGISTS							
Academic Year	20,500	26,800	19,700	15,900			
Calendar Year	26,100	31,500	25,100	19,700			
SOCIAL SCIENTISTS							
Academic Year	21,100	27,000	20,800	16,900			
Calendar Year	25,000	31,900	21,700	18,900			
ECONOMISTS							
Academic Year	22,800	27,700	22,100	17,700			
Calendar Year	25,700	30,900					
SOCIOLOGISTS/ ANTHROPOLOGISTS							
Academic Year	19,500	26,800	19,700	16,500			
Calendar Year	25,000	32,800	23,800	19,500			
OTHER SOCIAL SCIENTISTS							
Academic Year	20,600	26,500	20,400	16,700			
Calendar Year	24,700	31,900	21,000	18,500			

NOTE: Includes individuals reporting Teaching as their primary or secondary work activity. All median salaries were computed for groups with fewer than 20 individuals reporting salary.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: American Psychological Association, 1980 Survey of Graduate Departments of psychology

Table 155

NUMBER AND MEDIAN 9-10 MONTH SALARIES OF FULL-TIME UNITED STATES FACULTY IN DOCTORAL DEPARTMENTS OF PSYCHOLOGY BY GEOGRAPHIC REGION, RANK AND YEARS IN RANK, 1980

ACADEMIC RANK AND YEARS IN RANK	GEOGRAPHIC REGION									
	Northeast (46 Departments)		Southeast (49 Departments)		Midwest (62 Departments)		West (42 Departments)		Total (199 Departments)	
	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median
FULL PROFESSOR										
At least 12 Years	148	35,168	124	32,450	195	33,433	124	34,500	591	33,792
6-11 Years	147	32,167	131	29,612	217	29,267	119	30,867	614	30,012
3-5 Years	74	29,350	58	26,750	113	27,025	65	28,577	310	27,600
Less than 3 Years	62	2[illegible],000	74	24,550	102	24,500	51	25,878	289	25,133
ASSOCIATE PROFESSOR										
At least 6 Years	141	24,275	108	22,225	117	22,333	76	22,367	442	23,050
3-5 Years	98	23,370	96	21,050	105	21,875	80	22,050	379	22,027
Less than 3 Years	69	20,600	98	19,517	111	20,288	53	21,189	331	20,280
ASSISTANT PROFESSOR										
At least 3 Years	125	18,200	137	17,750	144	17,650	96	18,675	502	17,972
Less than 3 Years	110	16,479	128	16,100	156	16,317	68	16,550	462	16,364
LECTURER OR INSTRUCTOR										
At least 3 Years	9	21,000	4	17,650	10	15,750	6	20,950	29	18,075
Less than 3 Years	12	14,550	7	15,025	25	15,000	15	17,458	59	15,400

Table 156

NUMBER AND MEDIAN 9-10 MONTH SALARIES OF FULL-TIME UNITED STATES FACULTY IN MASTER'S DEPARTMENTS OF PSYCHOLOGY BY GEOGRAPHIC REGION, RANK AND YEARS IN RANK, 1980

ACADEMIC RANK AND YEARS IN RANK	GEOGRAPHIC REGION									
	Northeast (22 Departments)		Southeast (38 Departments)		Midwest (29 Departments)		West (29 Departments)		Total (118 Departments)	
	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median
FULL PROFESSOR										
At least 12 Years	24	$29,050	29	$26,400	31	$28,362	60	$31,374	144	$29,319
6-11 Years	42	28,050	49	24,625	53	27,900	81	29,500	225	28,011
3-5 Years	16	23,050	23	23,525	24	24,583	33	29,338	96	25,150
Less than 3 Years	17	25,300	22	22,450	25	23,100	35	26,043	99	23,967
ASSOCIATE PROFESSOR										
At least 6 Years	58	23,983	54	21,050	42	22,550	40	23,117	194	22,800
3-5 Years	31	21,012	78	20,717	39	20,300	47	22,612	195	21,067
Less than 3 Years	12	18,050	43	19,433	35	18,725	37	20,644	127	19,300
ASSISTANT PROFESSOR										
At least 3 Years	35	18,600	85	17,567	60	17,850	25	17,500	205	17,740
Less than 3 Years	29	15,512	66	15,650	48	15,550	30	17,900	173	15,840
LECTURER OR INSTRUCTOR										
At Least 3 Years	1	24,000	5	14,600	2	14,850	2	14,850	10	14,817
Less than 3 Years	3	14,475	16	12,550	10	14,050	11	16,433	40	14,030

SOURCE: American Psychological Association, 1980 Survey of Graduate Departments of Psychology.

Table 157

NUMBER AND MEDIAN 9-10 MONTH SALARIES OF FULL-TIME UNITED STATES FACULTY IN GRADUATE DEPARTMENTS OF PSYCHOLOGY BY DEPARTMENT, RANK AND YEARS IN RANK, 1980

Academic Rank and Years in Rank	DEPARTMENT											
	Psychology, Psychological Sciences (236 Departments)		Educational Psychology, Education (23 Departments)		Counseling Psychology Counselor Education (27 Departments)		Human Development Child Development (10 Departments)		Professional School (7 Departments		Other* (14 Departments)	
	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median	Number	Median
FULL PROFESSOR												
At least 12 Years	607	32,425	63	30,775	19	30,025	24	31,017	5	33,300	17	33,900
6-11 Years	691	29,580	61	28,400	48	27,550	19	28,625	12	35,217	8	25,050
3-5 Years	327	27,580	27	26,400	24	24,350	14	28,000	1	25,000	13	24,025
Less than 3 Years	318	25,317	17	23,975	17	23,100	13	25,700	14	22,050	9	24,000
ASSOCIATE PROFESSOR												
At least 6 Years	531	23,000	61	21,967	21	22,975	11	23,967	5	26,000	7	29,025
3-5 Years	493	21,578	21	23,300	24	20,050	21	23,025	8	20,450	7	26,000
Less than 3 Years	385	20,046	24	20,100	20	19,550	18	20,250	5	24,975	6	19,850
ASSISTANT PROFESSOR												
At least 3 Years	592	17,832	36	18,983	20	17,975	29	17,600	12	18,850	18	18,050
Less than 3 Years	537	16,049	35	16,462	22	16,550	24	17,350	5	18,788	12	16,517
LECTURER OR INSTRUCTOR												
At least 3 Years	27	17,600	3	19,900	2	18,050	7	15,600	0		0	
Less than 3 Years	74	14,983	4	15,150	5	15,000	12	13,150	3	16,025	1	14,700

* This is a heterogeneous category which includes, for example, school psychology, biological psychology, interdisplinary programs, etc.

Table 158

NUMBER, MEDIAN AND MEAN 9-10 MONTH SALARIES OF FULL-TIME FACULTY IN UNITED STATES DEPARTMENTS OF PSYCHOLOGY BY RANK AND YEARS IN RANK, 1980

YEARS IN RANK	Full Professor			Associate Professor			Assistant Professor			Lecturer or Instructor		
	Number	Median	Mean	Number	Median	Mean	Number	Median	Mean	Number	Median	Mean
At Least 12 Years	735	32,014	32,938									
6-11 Years	839	29,475	29,834									
At Least 6 Years				636	22,983	23,053						
3-5 Years	406	27,350	27,736	574	21,693	22,032						
At Least 3 Years							707	17,908	18,112	39	17,900	17,841
Less Than 3 Years	388	24,983	25,455	458	20,061	20,400	635	16,207	16,404	99	14,980	15,119

SOURCE: 1981 Salary Survey, American Psychological Association, September 1981.

Table 159

SELECTED 9-10 MONTH MEDIAN AND MEAN SALARIES FOR DOCTORAL-LEVEL PSYCHOLOGISTS† IN FACULTY POSITIONS BY EMPLOYMENT SETTING AND ACADEMIC RANK, 1981

Employment Setting Academic Rank	Median	Mean
University Psychology Department		
Full Professor	$33,000	$33,419
Associate Professor	23,500	23,723
Assistant Professor	18,000	18,491
Lecturer/Instructor	*	*
Four-Year College Psychology Department		
Full Professor	28,000	27,966
Associate Professor	22,000	21,784
Assistant Professor	17,000	17,892
Lecturer/Instructor	16,000	17,400

† Members of the American Psychological Association.

* Statistics not provided when N's are less than 5.

SOURCE: The American Mathematical Society NOTICES, Vol. 27, No. 7, November 1980.

Table 160

NUMBER AND MEDIAN SALARY RANGES FOR DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1979-80 AND 1980-81

TYPE OF INSTITUTION	RANK	1979-80			1980-81		
		NUMBER OF FACULTY		MEDIAN RANGES	NUMBER OF FACULTY		MEDIAN RANGES
		Total	Women		Total	Women	
Doctorate Granting Departments GROUP I*	Instructor/Lecturer	71	7		44	5	
	Assistant Professor	159	19	$16,300-18,300	150	18	$17,800-20,300
	Associate Professor	163	9	21,100-23,800	155	11	23,700-26,100
	Professor	569	12	29,800-36,500	550	12	33,200-40,800
Doctorate Granting Departments GROUP II*	Instructor/Lecturer	74	8	12,500-15,600	59	8	14,200-17,700
	Assistant Professor	240	18	16,000-18,500	224	19	17,600-20,000
	Associate Professor	382	18	21,500-23,300	391	19	23,500-25,700
	Professor	532	15	28,300-33,000	542	16	31,200-36,700
Doctorate Granting Departments GROUP III*	Instructor/Lecturer	56	11	10,700-14,200	47	6	11,800-15,700
	Assistant Professor	384	39	16,300-18,300	361	36	17,900-19,500
	Associate Professor	562	16	21,000-23,100	564	24	22,300-25,000
	Professor	639	17	26,300-31,800	665	17	28,400-34,000
Doctorate Granting Departments GROUP IV*	Instructor/Lecturer	7	1		6	1	
	Assistant Professor	149	18	17,500-19,400	147	19	18,800-20,600
	Associate Professor	110	3	22,400-26,400	112	3	23,200-28,700
	Professor	228	7	31,200-36,600	241	9	33,400-38,800
Doctorate Granting Departments GROUP V*	Instructor/Lecturer	9	4		14	7	
	Assistant Professor	169	21	18,600-20,700	186	22	21,000-22,600
	Associate Professor	129	3	22,300-25,500	137	5	24,300-27,500
	Professor	242	7	32,000-37,200	246	6	35,200-40,300
Doctorate Granting Departments GROUP VI*	Instructor/Lecturer	1	0		1	0	
	Assistant Professor	57	2	16,700-24,400	55	3	17,900-24,900
	Associate Professor	159	6	24,300-31,000	151	5	26,200-31,400
	Professor	146	2	31,800-39,900	158	2	34,400-39,600
Master's Degree Granting Departments	Instructor/Lecturer	18	9		28	10	
	Assistant Professor	526	77	16,100-19,000	534	85	17,600-20,700
	Associate Professor	917	69	20,400-23,400	906	74	22,000-25,200
	Professor	754	47	24,600-29,800	794	49	26,200-32,000
Bachelor's Degree Granting Departments	Instructor/Lecturer	18	3		21	4	
	Assistant Professor	509	79	14,500-17,200	521	85	15,700-18,800
	Associate Professor	603	58	17,100-21,200	618	59	18,300-23,200
	Professor	473	43	20,200-27,000	497	43	22,500-29,500

*See footnote to TABLE

SOURCE: The American Mathematical Society NOTICES, Vol. 27, No. 7, November 1980.

Table 161

NUMBER AND MEDIAN SALARY RANGES FOR NON-DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1979-80 AND 1980-81

TYPE OF INSTITUTION	NON-PH.D. DEGREE RANK	1979-80 NUMBER OF FACULTY Total	1979-80 NUMBER OF FACULTY Women	1979-80 MEDIAN RANGES	1980-81 NUMBER OF FACULTY Total	1980-81 NUMBER OF FACULTY Women	1980-81 MEDIAN RANGES
Doctorate Granting Departments GROUP II*	Instructor/Lecturer	42	25	$12,500-19,000	45	22	$14,200-20,600
	Assistant Professor	8	0		8	1	
	Associate Professor	1	0		0	0	
	Professor						
Doctorate Granting Departments GROUP III*	Instructor/Lecturer	83	41	11,000-15,300	89	49	12,000-16,600
	Assistant Professor	52	16	15,600-18,800	49	16	17,000-20,400
	Associate Professor	48	4	20,900-24,500	46	4	22,600-26,700
	Professor	11	0		13	0	
Master's Degree Granting Departments	Instructor/Lecturer	255	129	11,600-16,100	220	112	13,200-16,700
	Assistant Professor	283	68	16,500-19,700	259	61	17,700-21,500
	Associate Professor	233	37	19,700-23,400	243	39	20,900-25,000
	Professor	55	6	25,600-31,400	55	6	26,200-34,500
Bachelor's Degree Granting Departments	Instructor/Lecturer	231	102	11,800-14,100	245	109	12,500-15,100
	Assistant Professor	315	68	14,000-18,300	304	64	15,000-20,000
	Associate Professor	268	30	16,300-20,200	262	30	17,200-22,000
	Professor	70	8	21,000-26,000	79	8	22,100-28,300

* Group I and Group II include the leading departments of mathematics in the U.S. as rated by the American Council of Education in 1969 in "A Rating of Graduate Programs" by Kenneth D. Roose and Charles J. Andersen, in which departments were ranked according to the quality of their graduate faculty. Group I is composed of the 27 departments ranked highest; Group II is made up of the other 38 leading departments listed in that report. Group III contains all other U.S. departments of mathematics. Group IV includes U.S. departments of statistics, biostatistics and biometrics. Group V includes all other U.S. departments in the mathematical sciences. Group VI consists of all departments in the mathematical sciences from Canadian universities.

SOURCE: American Institute of Chemical Engineers, Chemical Engineering Progress, June 1980.

Table 162

NUMBER AND AVERAGE SALARIES OF FACULTY IN CHEMICAL ENGINEERING DEPARTMENTS BY GEOGRAPHICAL REGION AND RANK, 1979-80

GEOGRAPHICAL REGION	ACADEMIC RANK							
	Professor		Associate Prof.		Assistant Prof.		All Ranks	
	No.	Average Salary	No.	Average Salary	No.	Average Salary	No.	Average Salary
New England	9	$30,245	18	$23,527	16	$19,544	43	$23,451
Middle Atlantic	68	32,388	38	25,148	44	20,289	150	27,005
East North Central	75	31,508	22	24,891	23	20,943	120	28,257
West North Central	31	29,344	17	23,408	9	20,362	57	26,115
South Atlantic	50	31,391	19	24,358	23	20,509	92	27,218
East South Central	18	26,557	11	22,832	6	19,518	35	24,180
West South Central	54	32,749	14	24,806	17	20,771	85	29,045
Mountain	39	29,275	20	23,053	18	19,786	77	25,441
Pacific	14	33,537	5	24,040	8	20,255	27	27,843
All Regions	358	31,214	164	24,180	164	20,308	686	26,925

SOURCE: American Chemical Society, Salaries 1981 - Analysis of the American Chemical Society's 1981 Survey of Salaries and Employment, July 1981.

Table 163

MEDIAN ANNUAL SALARIES OF CHEMISTS EMPLOYED IN COLLEGES AND UNIVERSITIES BY DEGREE LEVEL, SEX AND YEARS SINCE B.S., 1981

YEARS OF EXPERIENCE	MASTER'S			Ph.D.		
	Men	Women	Total	Men	Women	Total
2-4	$15,750	$	$15,750	$	$	$
5-9	16,000	12,650	15,400	18,170	16,600	18,000
10-14	20,000	18,510	19,200	20,000	18,000	20,000
15-19	22,285	23,250	22,285	24,000	22,600	23,750
20-24	23,000	16,715	2[illegible],000	28,200	21,500	28,000
25-29	23,000	23,000	23,000	30,000	24,258	30,000
30-34	25,167	11,470	24,000	32,825	31,500	33,000
35-39	27,290	23,000	25,000	36,000	26,500	35,500
40+	27,270	24,345	27,000	36,375	28,500	36,500
Overall	22,000	16,434	21,400	27,000	21,400	26,200

SOURCE: Chemical and Engineering News, Vol. 9, June 22, 1981.

Table 164

MEDIAN ANNUAL SALARIES OF DOCTORAL CHEMISTS EMPLOYED IN ACADEMIC INSTITUTIONS BY TYPE OF INSTITUTION AND RANK, 1981

TYPE OF INSTITUTION AND HIGHEST DEGREE AWARDED IN CHEMISTRY	RANK OF Ph.D. CHEMISTS			
	Professor	Associate Professor	Assistant Professor	All Ph.D. Chemists*
PRIVATE				
Ph.D.	$40,000	$26,200	$21,900	$29,000
M.S.	30,000	23,600	17,100	26,000
B.S.	24,000	20,200	16,800	21,000
PUBLIC				
Ph.D.	36,600	26,000	20,800	29,300
M.S.	29,500	22,700	18,000	25,600
B.S.	29,500	22,000	18,000	24,000
ALL UNIVERSITIES AND COLLEGES**	32,500	24,000	19,100	26,200

*Includes instructors, unranked faculty members, and nonfaculty employees.

**Includes schools where highest degree offered in chemistry is Associate.

SOURCE: American Association of Colleges of Pharmacy, Annual Survey of Faculty Salaries, 1980-81.

Table 165

NUMBER AND AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY YEARS IN RANK AND ACADEMIC RANK, 1980-81

Years in Rank	ACADEMIC RANK									
	Professor		Associate Professor		Assistant Professor		Dean		Ass't./Associate Dean	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
0-1	34	$34,423	104	$29,400	208	$23,199	4	$39,331	18	$33,882
2-5	84	37.591	223	31,116	304	25,373	26	49,449	29	38,722
6-10	91	38,654	69	31,603	47**	27,352	21	46,449	26	38,975
11-15	27	39,950	25*	30,239			19*	51,512	18*	42,350
16-20	58	40,119								
21+	19	44,356								
Overall	317	38.782	428	30,653	568	24,645	70	48,531	95	38,557

* Covers 11+ Years in Rank.

** Covers 6+ Years in Rank.

Note: Totals do not add because all faculty did not report years in rank.

Table 166

AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY DISCIPLINE AND ACADEMIC RANK, 1980-81

Discipline	ACADEMIC RANK							
	Professor		Associate Professor		Assistant Professor		Instructors	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Pharmacy/Pharmaceutics	89	$38,834	75	$31,076	71	$25.815	24	$18,434
Pharmaceutical/ Medicinal Chemistry	92	40,146	76	29,678	34	24,355	3	16,792
Pharmacognosy	22	39,103	20	31,204	11	24.836		
Pharmacy Administration	23	38,400	39	30,295	34	30,295	11	21,344
Pharmacology/Toxicology	58	38.404	66	30,088	54	24,859	4	18,438
Hospital Pharmacy	3	45,032	7	33,703	16	27,227	6	23,681
Clinical Pharmacy	20	34,068	139	31,060	340	23,968	51	20,674
Bionucleonics and Nuclear Pharmacy	10	39,685	6	31,024	8	26,285		

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Salaries of Engineers in Education, 1980.

Table 167

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS ON NINE-MONTH CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1980

RANK	YEARS SINCE BACCALAUREATE								
	5	7	9-11	15-17	18-20	21-23	24-26	27-29	35+
Professors	$	$	(19) $25,200	(278) $27,750	(460) $28,950	(534) $29,950	(472) $30,800	(477) $31,400	(791) $31,550
Associate Professors	(3) $ *	(6) $22,250	(149) $22,900	(468) $23,650	(388) $23,750	(291) $23,800	(208) $23,700	(173) $23,600	(248) $23,100
Assistant Professors	(88) $19,350	(124) $19,650	(483) $19,950	(140) $20,100	(68) $20,000	(65) $19,800	(51) $19,600	(45) $19,350	(59) $18,650
Instructors	(18) $15,500	(14) $15,900	(42) $16,450	(17) $17,300	(12) $17,600	(10) $17,900	(9) $18,100	(8) $18,250	(24) $18,600
Administrators	$	$	(2) $ *	(17) $29,650	(22) $31,000	(30) $32,300	(29) $33,450	(17) $34,500	(39) $37,250
All Faculty†	(94) $18,650	(138) $19,550	(684) $20,950	(931) $23,800	(977) $25,100	(948) $26,300	(779) $27,300	(743) $28,100	(1,137) $28,300

†Includes faculty in technical schools
*No median computed for less than 5 persons

Table 168

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS ON TWELVE-MONTH CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1980

RANK OR POSITION	YEARS SINCE BACCALAUREATE								
	7	9-11	12-14	15-17	18-20	21-23	24-26	27-29	35+
Professors	$	(2) $ *	(12) $34,150	(12) $35,750	(25) $37,200	(35) $38,450	(33) $39,500	(30) $40,300	(66) $40,400
Associate Professors	$	(14) $29,700	(26) $30,950	(31) $31,750	(29) $32,100	(12) $32,050	(15) $31,750	(11) $31,200	(8) $28,950
Assistant Professors	(19) $25,350	(50) $26,450	(40) $27,050	(27) $27,150	(7) $26,750	(7) $26,000	(4) $ *	(5) $23,700	$
Administrators	$	(10) $32,000	(15) $33,750	(51) $35,450	(86) $37,000	(90) $38,400	(89) $39,550	(87) $40,400	(106) $40,550
Researchers	(18) $18,600	(56) $20,350	(60) $22,000	(48) $23,500	(41) $24,800	(34) $25,700	(21) $26,300	(21) $26,550	(45) $25,600

*No median computed for less than 5 persons

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Salaries of Engineers in Education, 1980

Table 169

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN TECHNICAL SCHOOLS ON NINE-MONTH CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1980

RANK	YEARS SINCE BACCALAUREATE								
	7	9-11	12-14	15-17	18-20	21-23	24-26	27-29	35+
Professors	$	(4) $ *	(6) $21,900	(7) $22,600	(15) $23,300	(17) $23,950	(20) $24,600	(21) $25,250	(13) $27,300
Associate Professors	$	(6) $19,050	(16) $22,600	(24) $21,750	(30) $21,500	(26) $21,450	(14) $21,450	(15) $21,450	(15) $21,450
Assistant Professors	$	(23) $18,100	(38) $18,600	(14) $18,950	(16) $19,150	(15) $19,200	(14) $19,100	(13) $18,900	(11) $17,600
Instructors	(8) $15,250	(11) $16,050	(8) $16,800	(19) $17,450	(7) $18,100	(2) $ *	(6) $19,000	(5) $19,250	(13) $18,900
Administrators†	$	(2) $ *	(8) $24,050	(9) $25,850	(13) $26,650	(9) $27,000	(6) $27,150	(9) $27,200	(10) $27,250

*No median computed for less than 5 persons
†On 12-month contracts

Table 170

NUMBER, MEDIAN AND MEAN SALARIES OF FACULTY IN ENGINEERING & TECHNICAL SCHOOLS BY RANK, TYPE OF INSTITUTION AND MONTHS ON CONTRACT, 1980

TYPE OF INSTITUTION	Instructor	Assistant Professor	Associate Professor	Professor	Administrator	Researcher
Engineering School, Ph.D. Program						
(9-10 Month Contract)						
Number	(208)	(1,501)	(2,059)	(3,202)	(133)	(102)
Median Salary	$16,150	$19,000	$23,850	$30,600	$36,700	$24,500
Mean Salary	17,200	20,100	24,050	31,450	36,900	23,700
(11-12 Month Contract)						
Number	(48)	(200)	(165)	(247)	(516)	(480)
Median Salary	$22,000	$26,300	$31,300	$39,300	$39,850	$21,450
Mean Salary	22,300	26,400	31,300	39,650	39,600	22,750
Engineering School, Non-Ph.D. Program						
(9-10 Month Contract)						
Number	(83)	(317)	(495)	(487)	(48)	
Median Salary	$16,450	$18,900	$22,150	$28,150	$27,650	$
Mean Salary	17,050	18,850	22,200	28,000	28,000	
(11-12 Month Contract)						
Number		(6)	(5)	(16)	(128)	(17)
Median Salary	$	$23,000	$23,750	$34,000	$35,000	$24,500
Mean Salary		23,600	25,600	34,500	34,600	25,350
Technical Schools						
(9-10 Month Contract)						
Number	(125)	(186)	(169)	(134)	(21)	
Median Salary	$16,800	$18,400	$21,550	$24,700	$25,150	$
Mean Salary	17,400	18,450	21,650	24,950	25,900	
(11-12 Month Contract)						
Number	(62)	(30)	(19)	(8)	(74)	
Median Salary	$18,900	$20,000	$23,100	$21,000	$26,450	$
Mean Salary	19,050	19,950	23,600	21,250	27,300	

SOURCE: College and University Personnel Association, 1980-81 Administrative Compensation Survey, February 1981.

Table 171

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION AND CONTROL, 1980-81

POSITION	All Institutions		Median Salary	
	Number	Salary	Public	Private
Chief Executive Officer, System	143	$56,100	$57,000	$45,000
Chief Executive Officer, Single Institution	1,390	47,610	48,267	45,000
Executive Vice President	373	39,000	41,650	35,000
Chief Academic Officer	1,364	37,200	39,936	32,610
Chief Business Officer	1,376	35,000	37,500	31,049
Chief Student Affairs Officer	1,344	30,756	34,700	26,000
Chief Development Officer	731	31,400	33,350	30,250
Chief Public Relations Officer	739	24,500	28,845	19,800
Chief Planning Officer	297	33,768	35,000	29,500
Director, Personnel/Human Resources	635	26,474	29,124	22,500
Chief Health Professions Officer	136	39,003	39,240	38,033
Chief Budgeting Officer	411	30,324	30,408	39,000
Director, Legal Services	177	35,000	35,000	35,000
Registrar	1,284	23,151	26,496	19,450
Director, Church Relations	133	19,000	28,000	18,662
Director, Learning Resources Center	460	25,704	27,267	19,200
Director, Library Services	1,233	26,035	30,525	21,497
Director, Computer Services	946	27,000	29,580	23,625
Director, Educational Media Services	427	22,000	25,256	17,000
Director, Institutional Research	547	27,034	29,000	22,090
Director, Special & Deferred Gifts	261	24,800	27,500	23,670
Administrator, Grants & Contracts	449	27,251	29,470	22,250
Director, Affirmative Action/Equal Employment	397	25,963	26,350	23,000
Director, Employee Training	99	23,940	23,940	23,500
Comptroller	873	27,000	29,400	24,500
Director, Internal Audit	278	25,800	26,325	25,000
Bursar	308	19,694	21,780	17,446
Director, Food Services	415	22,125	24,206	20,300
Director, Physical Plant	1,251	25,000	27,305	21,900
Director, Purchasing	717	22,200	23,532	18,800
Director, Bookstore	881	16,440	18,800	13,300
Director, Campus Security	791	19,867	21,300	17,000
Director, Information Systems	248	31,478	32,000	30,000
Director, News Bureau	254	19,200	22,008	16,800
Director, Auxiliary Services	293	28,000	29,796	23,857
Director, Admissions	1,014	24,611	26,136	23,220
Director, Foreign Students	230	20,601	21,840	19,250
Director, International Studies Education	98	29,150	31,775	24,800
Director, Student Financial Aid	1,266	20,733	23,801	18,050
Director, Student Placement	913	20,671	23,433	17,808
Director, Student Counseling	874	24,700	27,268	20,245
Director, Student Union	570	21,600	24,206	16,500
Director, Student Health Services	568	21,924	35,207	16,000
Director, Student Housing	643	19,177	22,650	15,750
Director, Athletics	875	28,050	31,670	24,600

SOURCE: College and University Personnel Association, 1980-81 Administrative Compensation Survey, February 1981.

Table 171 (continued)

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION AND CONTROL, 1980-81

POSITION	All Institutions		Median Salary	
	Number	Salary	Public	Private
Director, Campus Recreation/Intermurals	323	$ 19,639	$ 21,181	$ 16,300
Director, Alumni Affairs	678	19,630	23,260	17,655
Director, Information Office	449	21,809	23,500	19,500
Director, Community Services	342	25,670	27,013	20,533
Administrator, Hospital Medical Center	52	56,102	56,102	62,300
Chief Planning & Budget Officer	90	36,500	38,288	32,000
Chief Development & Public Relations Officer	188	32,497	33,700	32,000
Director, Personnel & Affirmative Action	245	23,135	24,797	20,710
Director, Admissions & Financial Aid	125	26,256	27,718	26,000
Director, Housing & Food Services	50	32,000	32,580	28,500
Director, Development & Alumni Affairs	99	27,756	28,100	25,000
Dean, Architecture	61	44,954	44,954	44,000
Dean, Agriculture	101	41,784	42,192	
Dean, Arts and Letters	101	36,060	37,342	23,333
Dean, Arts and Sciences	398	39,000	39,250	38,000
Dean, Business	596	37,163	37,356	36,840
Dean, Communications	114	32,212	33,587	26,667
Dean, Continuing Education	544	31,317	33,104	25,600
Dean, Dentistry	55	60,009	59,770	60,995
Dean, Education	425	38,494	40,524	29,694
Dean, Engineering	237	45,348	44,813	46,636
Dean, Experimental Programs	28	32,212	36,132	17,000
Dean, Extension	84	35,016	36,000	27,500
Dean, Fine Arts	183	35,692	38,292	26,313
Dean, Graduate Programs	373	39,500	41,150	34,020
Dean, Health Related Professions	186	35,765	35,900	35,000
Dean, Home Economics	78	38,110	41,000	22,480
Dean, Humanities	218	30,194	32,308	25,464
Dean, Instruction	40	33,650	35,000	23,760
Dean, Law	133	56,000	54,243	56,800
Dean, Library & Information Sciences	78	38,494	38,500	33,000
Dean, Mathematics	119	31,716	33,750	25,867
Dean, Medicine	78	76,837	76,000	94,000
Dean, Music	103	33,600	35,101	30,872
Dean, Nursing	291	34,000	34,064	32,500
Dean, Occupational Studies/Voc. Educ./Technology	236	32,203	32,266	27,830
Dean, Pharmacy	60	50,000	50,100	48,000
Dean, Public Health	17	45,348	38,060	57,452
Dean, Sciences	269	32,815	34,450	26,772
Dean, Social Sciences	240	30,067	32,052	24,047
Dean, Social Work	95	38,827	40,000	37,540
Dean, Special Programs	80	26,892	28,077	24,859
Dean, Undergraduate Programs	62	37,600	38,540	33,850
Dean, Veterinary Medicine	29	55,600	54,891	

SOURCE: National Education Association, Estimates of School Statistics 1980-81, March 1981.

Table 172

ESTIMATED AVERAGE ANNUAL SALARIES OF ELEMENTARY AND SECONDARY INSTRUCTIONAL STAFF AND PUBLIC SCHOOL CLASSROOM TEACHERS BY STATE, 1980-81

STATE	Instructional Staff	Classroom Teachers
United States	$18,162	$17,264
Alabama	15,472	15,150
Alaska	30,292	21,558
Arizona	17,800	17,200
Arkansas	13,670	13,270
California	20,477	19,836
Colorado	18,009	17,408
Connecticut	18,100	17,370
Delaware	18,052	17,243
District of Columbia	23,640	22,880
Florida	16,360	15,564
Georgia	16,218	15,444
Hawaii	22,107	21,558
Idaho	15,650	15,110
Illinois	20,149	19,410
Indiana	18,795	18,054
Iowa	16,610	16,150
Kansas	15,964	15,059
Kentucky	16,630	15,580
Louisiana	15,000	14,960
Maine	19,052	13,732
Maryland	19,863	19,270
Massachusetts	24,973	18,712
Michigan	21,012	21,213
Minnesota	18,753	18,062
Mississippi	13,400	13,000
Missouri	16,143	15,187
Montana	15,980	15,400
Nebraska	15,659	14,870
Nevada	18,190	17,107
New Hampshire	13,434	12,948
New Jersey	20,025	18,300
New Mexico	16,269	15,721
New York	21,000	20,400
North Carolina	16,175	15,858
North Dakota	14,356	13,864
Ohio	17,100	16,200
Oklahoma	15,040	14,640
Oregon	18,389	17,503
Pennsylvania	18,120	17,690
Rhode Island	19,807	19,351
South Carolina	14,630	13,970
South Dakota	14,370	13,636
Tennessee	15,239	15,002
Texas	15,755	15,150
Utah	17,414	16,612
Vermont	13,654	13,006
Virginia	15,490	14,874
Washington	21,709	20,702
West Virginia	16,073	14,660
Wisconsin	17,086	16,748
Wyoming	19,290	18,718

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